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SOME OLD TIME YACHT MATCHES

By W. J. Henderson

THE history of yachting in the United States begins with the history of the New York Yacht Club. No record exists of a representative yacht or yachtsman before 1844, the year in which the club had its origin. And if one looks over the list of nine starters in the first regatta in 1845, he will discover only one name which can be set down as having had a direct influence in the development of yachting in America. This is the name of J. C. Stevens, who owned the smart little schooner *Gimcrack*. They had quaint schooners in those days. There were no foretopmasts, no jib topsails, no fore staysails, no club topsails, no balloon maintopmast staysails. Three or four sails seemed to be enough for a schooner. But the sailormen sailed their own yachts. The rules of the club specified that only members were allowed to sail or handle boats. Under such rules Mr. Stevens became the commodore of the club in 1846, and the owner of the celebrated sloop *Maria*. In that year *Maria* was the winner in the club regatta and sailed with the schooner *Coquette* in October the first race over an outside course. It was twenty-five miles to windward, from the Gedney channel buoy and back, in a dusty northeaster. The schooner won.

In 1847 James M. Waterbury came forward with his thirty-nine-ton sloop *Una*, one of the wonders of her day. It has been said that her model suggested that of the *Puritan*. *Maria*, which was rated at 160 tons, won in her class in the annual regatta, while *Una* was the victor in hers. *Maria*, like all subsequent big sloops, was finally altered to schooner rig. These two yachts, with their owners, were the chief factors in the advancement of yachting sport in America till the now historic days of 1851. In that year the schooner *America* was built and crossed the ocean. She was the work of George Steers, the builder of the victorious *Una*. Commodore Stevens was one of the most active of her owners, of whom there were several, and his name stands as her owner on the famous cup which she brought to this country, and which is still here. *America* went to Europe without any definite prospects of a race, and she entered the regatta of the Royal Yacht Squadron for a cup open to yachts of all nations simply because she could not get any other good races. She won the cup handsomely, and she is a pretty good boat yet, after fifty years of wear and tear.

In 1857 the owners of *America*, Messrs. J. C. Stevens, Edwin A. Stevens, Hamilton Wilkes, J. Beekman Finley and George L. Schuyler, gave the cup to the New York Yacht Club to hold as a perpetual international trophy. It was eleven years, however, before any one on the other side of the water thought it wise to come over after it. Meanwhile the racing of yachts and the development of the sport was going on. In 1854 the famous sloop *Julia*, afterwards turned into the schooner *Nirvana*, appeared, and proved to be one of the smartest yachts in the fleet. In 1855 W. E. Burton, the actor, who owned a place at Glen Cove, started racing there by giving cups for a regatta. This was the beginning of yacht racing on Long Island Sound. The New York Yacht Club had already visited Newport and subsequently went farther east, sailing races off New Bedford. This was the origin of the

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later custom of going to New Bedford on the annual cruise.

In 1858 came the first race around Long Island, and with it there comes into the history of yachting in America the name of James Gordon Bennett, Jr. He was the commodore of the New York Yacht Club and the owner of the sloop *Rebecca*. He made her famous in this race by cutting through course, for any amount. In August, 1859, he raced *Rebecca* against the schooner *Restless* from Brenton's Reef Light to Throgg's Neck for $500 a side, and lost by twelve minutes. In 1860 he sailed *Rebecca* against *Julia* twenty miles to windward and return for $250 a side, and lost by thirteen minutes. On September 11, 1865, he raced his new schooner *Henrietta*, 230

MR. JAMES GORDON BENNETT.

Plum Gut, contrary to the conditions of the contest. *Una* started also in this race, her owner then being W. B. Duncan. Thus it may be seen that W. B. Duncan, Jr., comes naturally by his racing blood. Mr. Bennett did more than any other single man of his time to further the sport of yachting. He was always ready, like Caldwell Colt in later years, to race any one, over any tons, against George A. Osgood's schooner *Fleetwing*, 206 tons, from Sandy Hook to Cape May, the first race over that course. Again Mr. Bennett lost, but on October 16, of the same year, he raced his schooner against *Palmer* and won. Later in the autumn *Henrietta* defeated *Restless* for $500 a side from Sand's Point to Bartlett's Reef Lightship.

The next year Mr. Bennett was at it again. In October he raced *Henrietta* against *Vesta* from Sandy Hook to Cape May and back in an easterly gale and was defeated by fifty-six minutes. These matches led to the great ocean race of 1866. The yachtsmen of those days would have despised our modern racers. What they regarded as the true sport was a test not only of speed, but of weatherly qualities and endurance. To smash around the outside of Long Island in a hard blow was the sort of thing they liked. They preferred reefs to balloon canvas, and nothing short of a twenty-knot breeze was fit for their sailing. *Henrietta* won, sailing 3,106 miles in 13 days, 21 hours, and 55 minutes.

In all the history of yachting in this country there have been no brighter names than those of the men engaged in this race. They all had the finest sporting spirit. They were sailormen themselves, and they loved yachting for its own sake. A match race of any kind, certainly of enough importance to attract public interest, is a great rarity in these days, when everything is centered in the *America's* Cup, and racing shells with titanic sail spreads slip over summer seas within easy reach of the land and the ever

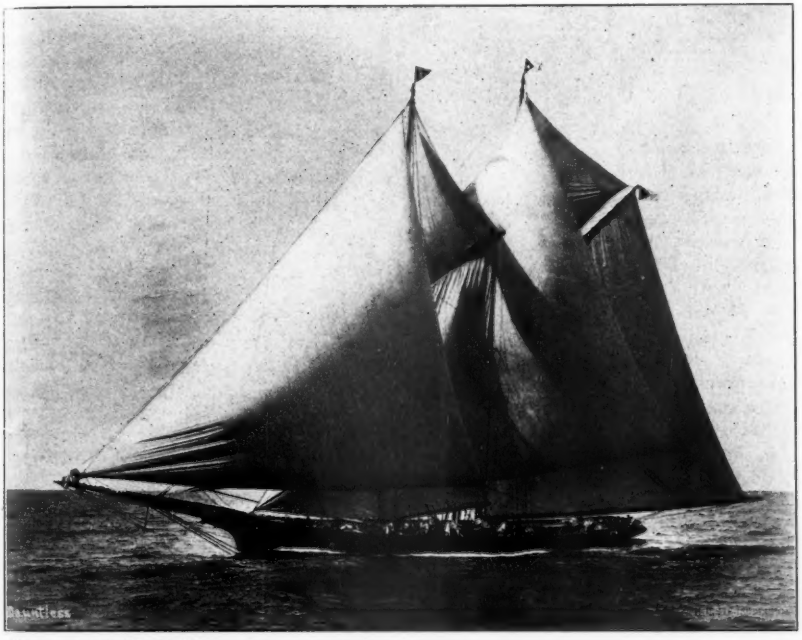


Photo by N. L. Stebbins, Boston.

THE *DAUNTLESS.*

And thus it came about that the owners of *Henrietta, Fleetwing* and *Vesta* came together in a transatlantic contest. The match was first made by George and Franklin Osgood, owners of *Fleetwing*, and Pierre Lorillard, owner of *Vesta*, for $30,000 a side, the course to be from Sandy Hook to the Needles in the English Channel. Mr. Bennett asked to be admitted to this race, and his request was granted. *Vesta* did the best sailing of the three, but lost through an error of her navigator and another by her channel pilot. attendant tug. The days of the racing of the cruising yacht, in which a man spends his summer, are gone, and such skippers as ramping, roaring Sammy Samuels, cracking on sail in the teeth of a northeaster till all was blue, are visions of the past.

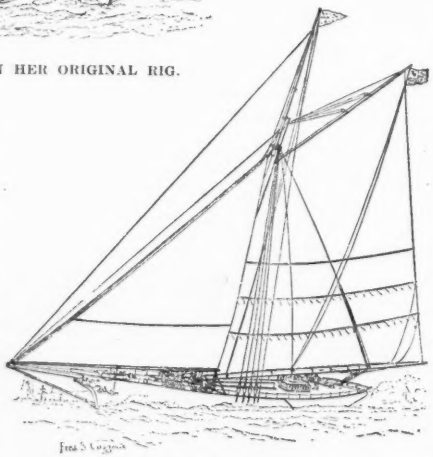
In 1867 appeared the famous schooner *Sappho*. She was built by the Poillons as a speculation. She was a keel schooner and her defeats by the *Palmer*, a centerboarder, deepened the erroneous impression, so prevalent in early days, that the centerboard was

THE *AMERICA* IN HER ORIGINAL RIG.

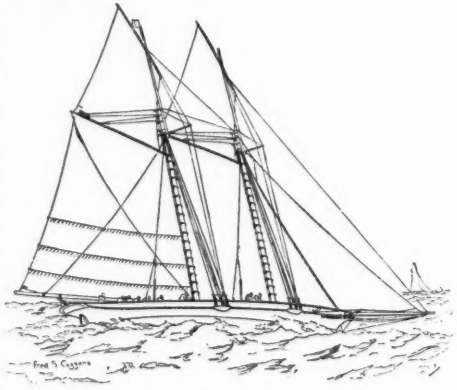
the secret of the excellence of the typical American yacht. *Sappho* was not a success at first, and the Poillons at length sent her to England in hope of finding a market for her. But again she was easily defeated, and came back to this country still on the hands of her builders. Finally, she was bought by William P. Douglas, vice commodore of the N. Y. Y. C., and altered by Robert Fish. From that time onward she proved a flyer, and she and Mr. Douglas must be set down in the list of yachts and owners who did their share toward developing the sport in this country.

In 1868 in the autumn regatta of the New York Yacht Club appeared the noted old sloop *Gracie*. She was a centerboarder in the seventy-foot class, and was first owned by William Voorhis. She passed from his hands into those of William Krebs, thence to those of John P. Waller, and then to those of Joseph P. Earle, under whom she did her most famous work. It would take a volume to recount the exploits of the *Gracie*. She was one of the competitors against *Mischief* for the honor of defending the *America's* Cup when the Canadian sloop *Atalanta* was the challenger. She was defeated, but her racing career did not end till about fifteen years ago. Many a splendid contest have I seen her in with the old skimming dish *Fannie* and the noble Harvey cutter *Bedouin*, the latter the property of Archibald Rogers, as fine an amateur sailor as ever trod a deck.

But this is anticipating. About the *Gracie's* time appears the name of John B. Herreshoff in the list of owners entering boats in a regatta. The mere mention of this is enough to recall to the mind of the reader the long series of developments with which the name of Herreshoff has been associated. I note also in the records of those days the name of Franklin Osgood as the owner of the schooner *Magic*. Mr. Osgood was still active in the sport and continued to be for some years. *Magic* was in the following year the first successful defender of the *America's* Cup, for in 1870 the first challenger, James Ashbury's *Cambria*, arrived to try to



THE *MARIA*.



THE *CAMBRIA*.

take the cup back home. Her crossing of the sea brought the indefatigable ocean racer, Mr. Bennett, forward once more. He was now the owner of the new and subsequently famous schooner *Dauntless*, and he matched her against *Cambria* for a race from England to New York. Sam Samuels commanded *Dauntless* and Mr. Bennett crossed on her. She was beaten by 1 hour 17 minutes.

Mr. Ashbury, an Englishman, did his share toward developing yachting, or at least, preserving the splendid spirit of the times, in this country. He kept a standing challenge

From a painting by W. Marsh. By the courtesy of the New York Yacht Club.

THE *JULIA*.
Modelled and built by George Steers.

out while he was here to sail any schooner afloat for fifty guineas a side. He found many takers and the days of his stay were full of yachting sport. He went home without the cup, but he came back for another try at it the following year. The season wound up with a series of matches off the Hook, in which *Sappho* and *Dauntless* each beat *Cambria*. Then the two American schooners had it out together. *Sappho* won and was christened "Queen of the Seas."

In the season of 1871 in a race to Cape May appeared the historic schooner *Dreadnaught*, owned by A. P. Stockwell and sailed by Captain Samuels. She did not cover herself with glory in that first race, but afterward, under the sail-carrying policy of Samuels, she proved to be one of the terrors of deep water. Her owner during her days of greatest glory was C. J. Osborn, one of the old breed of sporting yachtsmen, ready to race anyone anywhere for any amount. In 1872 Mr. Bennett established the Brenton's Reef Cup as a perpetual challenge trophy, open to yachts of all nations. It was last raced for in this country in 1885, when Sir Richard Sutton's cutter *Genesta*, the Cup challenger of that year, defeated *Dauntless*, then owned by Caldwell Colt, in a nasty gale of wind over the long course from Sandy Hook to and around Brenton's Reef Lightship and return. In October, 1874, I note the great match between William H. Langley's *Comet* and W. T. Garner's *Magic*. It was the same old *Magic*, but with the advent of Mr. Langley came the new spirit of the Atlantic Yacht Club. For years Mr. Langley was one of the most ardent yacht racers in this country, and to his energy not a little in the development of the sport is due. He still owns *Comet*, and she is still a tidy little schooner, though no longer in the racing class. In 1875 there was a race for steam yachts around Long Island, and one of the

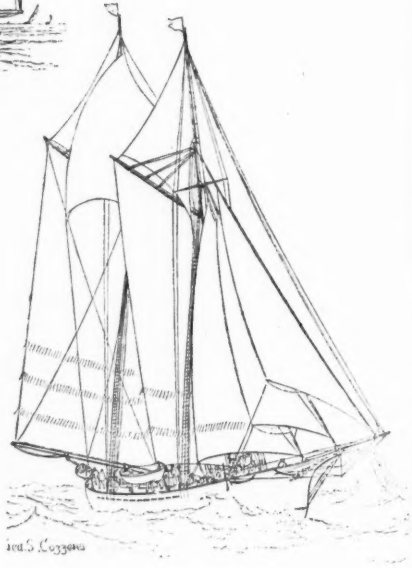
THE *REBECCA*.

THE *GRACIE*.

competitors was, of course, Jacob Lorillard. This gentleman owned and built more steam yachts in his time than any other one man, and he was really the father of steam yachting in America.

Names of men and yachts crowd upon me from this year forward, for it was in 1876 that I first began to be personally acquainted with yachts and yachting in this port of New York. It would not be possible for me to recount the exploits of all the representative men since that time, but a few may be mentioned.

Among them must not be forgotten E. M. Brown, who owned the smart sloop *Julia*. He was afterwards (in 1896) commodore of the New York Yacht Club. *Julia* was so good in her day that in later years she was schooner rigged and brought out by James D. Smith. But she had been outclassed, and soon disappeared from yachting chronicles. Archibald Rogers, too, owner of the *Bedouin*, must be named again; James D. Smith and the *Estelle*; Rufus Hatch and the *Resolute*; J. R. Busk and the *Mischief*; *Schemer* and *Oriva*, and C. Smith Lee—afterwards lost in the ill-fated yawl *Cythera*—Lester Wallack and the *Columbia*; James Stillman and the noble old schooner *Wanderer*; Roosevelt Schuyler, the most ardent and persistent advocate of the cutter model, and his smart cutters *Yolande* and *Destiny*; Robert Center, who, with his iron keel sloop *Vindex*, kept the seas in wintry weather and was always a true sailorman, and who ably seconded Mr. Schuyler in pushing the merits of cutters; Henry S. Hovey and his fine schooner *Fortuna*; Latham A. Fish and the famous *Grayling*; the rattling matches of *Gracie*, *Fanny*, *Bedouin* and *Oriva*, off the Hook in 1883, the dawn of the new era in yacht designing in 1885, when *Puritan* was built to race with *Genesta*; the splendid contests



THE *SAPPHO*.

THE *MAGIC*.

between C. Oliver Iselin's seventy-footer *Titania* and J. Rogers Maxwell's *Shamrock*—all these names and events played their part in bringing American yachting to the place where it now stands, at the head of all the yachting of the world.

But there is no room for full accounts of all these persons and yachts now. Suffice it to say in closing that to-day the old match-racing spirit seems to have died out. Racing is now confined to racing machines, and these have become so expensive to build and maintain that only a few persons are able to indulge in the sport. Men of the type of Mr. Bennett, Mr. Colt, Mr. Douglas and Mr. Osgood, instead of racing with one another for $500 or $1,000 a side, now put their money together into one fund for building defenders of the trophy of yachting supremacy, the old *America's* Cup.

The outward aspects of yachting have indeed changed, but we must not fancy that there is no longer any sporting blood. Like many another old-timer, I myself would jump with joy at the announcement of a challenge to race two or three big schooners from Sandy Hook to Cape May or Brenton's Reef Lightship and back; but after all is said and done, such races are not satisfactory as tests of yachts. They are rather tests of men, and we are testing these just as severely in other ways in our days.

THE *HENRIETTA*.

THE BEGINNINGS OF INTERNATIONAL RIFLE MATCH SHOOTING

By General George W. Wingate

(Captain of the First International Team)

NOTWITHSTANDING the experience of the Civil War had demonstrated that soldiers who could not shoot straight were of little value, and notwithstanding also that instruction in rifle shooting was regularly given in European armies, no such instruction existed in this country until the organization of the National Rifle Association in 1871. Theoretically, there was an army text book on the subject, a translation from the French, but it was of no value and was not used. The National Guardsman served his entire term of enlistment without firing a shot, and the regular did the same, except when he shot at Indians or game. A system introduced by the writer in 1867 in instructing Company A of the 22d N. G. N. Y., was adopted by that regiment as a whole and was printed by it for the use of its officers. This was elaborated in articles written for the *Army and Navy Journal* and led to the formation of the National Rifle Association on November 24, 1871. Its officers were: President, General A. E. Burnside; Vice-President, Colonel William C. Church; Treasurer, General John B. Woodward, and I was its secretary. General Burnside's connection with the organization was nominal and on July 22, 1872, he resigned, and Colonel Church was elected in his place and General Alex. Shaler vice-president.

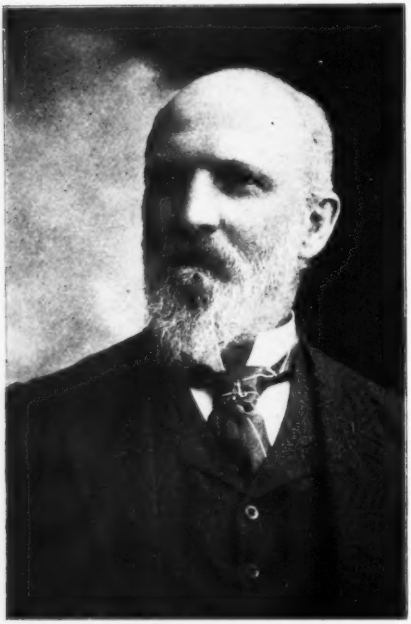


Photo by Butler, Brooklyn.

GENERAL GEORGE W. WINGATE.

Creedmoor was purchased in 1872, the State contributing $25,000 and New York and Brooklyn each $5,000. I made a personal examination of the ranges at Wimbledon, and together with John A. Church, the engineer, inspected the ranges in Canada. Creedmoor was laid out from the results of this investigation. At the request of the N. R. A. I wrote a "Manual for Rifle Practice" which was for many years the only work on the subject. The first meeting at this range took place June 21, 1873, and was participated in by representatives from most of the New York National Guard organizations and the United States Engineers, and by a squad from the regulars of Governor's Island, the latter being at the foot of the list.

The object of the National Rifle Association was to promote military shooting with military rifles. Several clubs were formed inside it to practice off-hand shooting, and the Amateur Rifle Club was organized for the promotion of long range firing. This was a small club, which included, however, nearly all the riflemen who subsequently became famous in the international matches and I was honored by being elected as its president.

One of the chief features of the Wimbledon

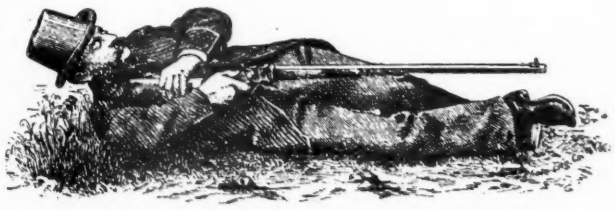
LIEUT. HENRY FULTON'S POSITION.

meetings of the British N. R. A. was a match for a shield presented by Lord Elcho in 1862 which was annually competed for by teams of eight from England, Ireland and Scotland respectively, at 800, 900 and 1,000 yards with match rifles, 15 shots at each distance in any position without artificial rest. In 1873, the Irish team under Major Arthur B. Leach won this match by a previously unparalleled score. Fired by their success Major Leach published in the *New York Herald* a challenge, on behalf of the Irish Rifle Association, to the riflemen of America to shoot a match in the autumn of 1874, under the following conditions: Targets and scoring same as adopted by the National Association of Great Britain (which was the same as those at Creedmoor); ranges, 800, 900, 1,000 and 1,100 yards; rifles any not exceeding ten pounds in weight, but without telescope sights or hair triggers. Position, any, but without artificial rest. Team to be from eight to six men, at the option of the Irish. The American team to be composed exclusively of riflemen born in the United States and to shoot with rifles of American manufacture, the Irish team to shoot with rifles made by Rigby of Dublin. As the challenge was to decide the rifle championship of the world, a sufficient stake was to be put up, not for the sake of pecuniary gain, but as a guaranty that the Irish team would meet the representative shots of America.

This challenge was brought before the directors of the National Rifle Association, but that board was too dignified a body to recognize "a mere newspaper publication," or a communication which was not addressed to it. It was ascertained later that the challenge was not sent to the N. R. A., because it was not known to exist. The Amateur Rifle Club, however, was less particular than its parent association. At a meeting held on February 4, 1874, its executive commitee was instructed to correspond with Major Leach and endeavor to arrange a match.

The action of the club in doing this cannot be described otherwise than as audacious. It had been organized only a short time, and its total membership was but 62. During the year 1873 it had had but five matches, all of which were at 500 yards. In these matches it was the habit of such of the members of the club as participated (who never exceeded nineteen in any one match) to lie in a long row in front of the targets in the prone position, each man in a squad firing alternately at the target to which he was assigned. Not a single member of the club had ever shot beyond 600 yards. As is well known, the atmospheric difficulties to be encountered at firing at long range are very much greater than at mid-range and require greater skill and experience.

The rifles which were then in use in this country were without Vernier scales on the rear sights and were used without wind gauges. Hepburn, who was a skilled mechanic, used to supply the want of a wind gauge on his rifle by tapping his foresight to one side or the other with a hammer, an act which excited considerable jealousy among his fellow members who were not



MR. G. W. YALE'S POSITION.

skilful enough themselves to imitate him. Our rifles did not even have a flat or "shotgun" butt. That used by the writer was an abomination in the shape of a crescent, which, while good enough in firing from the shoulder, when used in the prone position struck the collarbone in such a way as to create a practically permanent lump the size of a hen's egg and of all the colors of the rainbow.

The targets used at this time had square sub-divisions, but without what is known as the "center." At mid-range the target was six feet square, the bullseye two feet and center four feet square. At long ranges the target was six feet high and twelve feet wide, bullseye three feet square, center six feet square. The count was 4, 3, 2.

The scores in the 500 yards matches of the Amateur Club during 1873 indicate to any rifleman the skill, or rather want of skill, of its members, the winning scores being 25, 27, 26, 25, 27. Not only were the members of the club without experience and without proper sights upon their rifles but there were then no American rifles in existence which could be depended upon to do accurate firing at the ranges selected for the match. Above all, the club, though prosperous enough, was without the means which would be required to meet the heavy expenses connected with organizing and training a rifle team and with the running of such an important match.

For a club of this description to undertake to shoot against men like the Irish team, who were provided with the finest match rifles, having Vernier and wind gauge sights, who had been practicing for years at extreme ranges and who had just defeated the selected long range riflemen of both England and Scotland by an unparalleled score, seemed preposterous. Perhaps if the club had fully realized the contract undertaken it would have hesitated. Acting, however, upon the principle, "Nothing venture, nothing win," the Amateur Rifle Club proceeded to arrange for the terms of the match and to qualify themselves if not to win, to at least make a creditable endeavor to sustain the honor of the country.

As it was impossible to shoot at 1,100 yards at Creedmoor, that distance was eliminated. The stake was agreed on as being £100 or $500. The club had been a good deal troubled as to where it should get this money, but was relieved from the difficulty by the Remington Arms Company and the Sharps Rifle Company, each of which agreed to contribute one-half. These firms also guaranteed that they each would turn out, in time for practice for the match, an American rifle which in point of accuracy would be equal, if not superior, to the celebrated Rigby rifles which were used by the Irish team. Unlike the Rigby rifle, the new guns were to be breech loaders so the contest was to be one of old style muzzle loaders against the modern breech loaders.

These arrangements having been made, the Amateur Club formally accepted the challenge on behalf of the riflemen of America and issued an appeal to such riflemen to participate in the matches. In view of the small membership of the club it was hoped that there would be a general response to this invitation. Long range shooting, however, was at that time a thing entirely unknown. Neither ranges, rifles nor riflemen existed and no candidates for places upon the team, outside of the members of the club, presented themselves.

Early in the spring the promised rifles were made and they proved to be marvels in the way of accuracy. They were 45-caliber breech loaders (what is known as the Creedmoor pattern). They shot a 550-grain bullet, slightly hardened, of the same general description as the bullet used by the Irish, with a usual charge of 90 grains of black powder.

It had been generally supposed that a breech loader would be inferior in accuracy to a muzzle loader. To a certain extent this is the case where the rifle is shot without cleaning, as the pushing of the wad down on top of the powder practically cleans the barrel after each shot. In this match, however, cleaning between shots was permitted, and the man using the breech loader had the advantage that in looking through it he could know that it was perfectly clean. There was also danger that he would forget to put a bullet upon his charge, an accident which occurred to Sir Henry Halford during the Centennial match, although he had a servant who was specially instructed to watch him to see that he did not commit such a fault.

The first match of the Club at the ranges

which had been selected for the International competition took place on May 30, 1874, and had a decided tendency to produce a chill in the hearts of those who were anxious for American success: There were five shots at each distance, highest possible score 20, making a total of 60. The shooter also had the advantage of two sighting shots. The following are the seven highest scores: 46, 44, 39, 38, 36, 35, 31. These matches were continued, the winning scores showing a steady improvement, namely: June 20, Conlin, 45; June 27, Bodine, 45; July 11, Dakin, 48; July 25, Canfield, 45; Aug. 8, Hepburn, 54; Aug. 22, Hepburn, 54. It soon appeared that the number of those who could spare the time for the necessary practice, who would come within the restrictions of the match and who possessed sufficient skill to make it worth while for them to shoot for places, would be just sufficient to make up a team of eight with one or two reserves. Having been elected as the captain of the team I soon found that all my time and energies would be occupied in looking after the team, and that while I ought to shoot occasionally during the practice, in order to keep myself in touch with the team, it was out of the question to think of shooting in the match itself.

COL. JOHN BODINE'S POSITION.

In the practice of the men, as well as in the subsequent matches, the difference between the Americans and their opponents, whether from Ireland, England or Scotland, was marked. Each American was constantly studying to devise some new idea. When one was presented every member of the team gave it a fair trial. If it proved to be as good as the method which he had been previously using he adopted it with the idea that he might make it better. In this way by constant experiments and after frequent failures many valuable improvements were developed. One of these was the system of team shooting which is now universal. Each of the rifles, of course, required a more or less different elevation and wind allowance. From the records used in the different matches I tabulated these elevations so as to determine the relative difference between each rifle. The men shot in a certain defined order. When one was shooting the man who was to follow him set his rifle to the same allowance for elevation and wind as the one firing. When the bullet struck, the second man could tell by its position if his rifle was correctly sighted, and if the conditions remained unchanged would shoot as soon as possible. If the shot, however, was outside the bullseye, he made whatever alteration in his sights its position showed was required. In this way each member of the team profited by the experiences of the other so as to make the practice as nearly as possible to resemble that of one man firing continually. Our opponents on the other hand were firmly impressed with the idea that what existed was right. They would not adopt an innovation unless it was absolutely demonstrated that it was a great deal better than the system which they were using. Even then their prejudices against innovations were so great that the tests which they gave a new idea often were not fair. They shot as individuals, each man judging of the wind and elevation himself and paying but little attention to what those preceding them were doing. As individual shots they were superior to the American team particularly at 1,000 yards, but they had no idea of team work. One of the ideas which experience in handling the team led me to adopt and to which the victory was largely owing, was in making up the firing squads to put two of the best judges of wind and elevation to open the firing at each range and to select the steadiest and most reliable men to fire the final shots. The steady practice under the new team system soon made

a marked improvement in the scores. These gradually improved day by day and we soon found ourselves doing better than we had any right to reasonably anticipate. The fear of disastrous defeat passed and the hopes of victory began to be entertained. The Irish team arrived on the *Scotia* on September 15, 1874. In addition to Major Arthur B. Leach, the captain of the Irish Rifle Association, and the team itself, the party included the Viscount and Viscountess Massareene and Ferral, the Lord Mayor of Dublin and his daughter, Alderman Manning, and a number of other ladies and gentlemen.

The Irish were immensely pleased with the appearance of Creedmoor and stated they considered it the best range they had ever seen. They were much impressed with the difference in the atmosphere from what they were accustomed to in Ireland and England and said they could hardly believe that the 1,000 yard firing point was really that distance from the targets as the latter seemed so much nearer than what they usually shot at.

The 26th of September, 1874, was fixed for the date of the match and it was arranged that the two teams should practice together upon the 22d and 24th days of September. The practice on the 22d, although somewhat informal, gave to the Americans considerable encouragement, although they came away from the range with the feeling that the Irish team were more than their equal at the 1,000 yard distance. The practice on the 24th was in fact a rehearsal of the International match itself, the only difference being that the reserves as well as the team were engaged.

The following is a description of the members of the teams:

American:—Henry Fulton, civil engineer and lieutenant in the 12th Regiment, N. Y. N. G. He was a veteran of the Civil War having been confined as a prisoner at Andersonville. He invented the Fulton position, lying on his back, drawing his knees up V-shaped, putting the barrel of the rifle between his crossed legs, putting his left arm behind his neck, holding the butt of the gun in his left hand, the elbow of the right arm resting on the ground. G. W. Yale, superintendent of the Sharps Mfg. Co., lay on his right side, resting the gun over the left leg with the stock under the armpit. Col. John Bodine, former colonel of the 19th N. Y., shot in the prone position, as did Henry A. Gildersleeve, lieutenant-colonel of the 12th and a veteran of the Civil War. Thomas F. Dakin, a brigadier-general N. Y. N. G. L. L. Hepburn was a practical gun maker employed by Remington. He had made with his own hands the guns which he and Fulton used. He shot in substantially the same position as Yale. The reserves were J. T. B. Collins and Col. E. S. Sanford.

The Irish team consisted of Major Arthur B. Leach, Captain; John Rigby, an old Wimbledon champion, and the head of the old gun works of John Rigby & Co. James Wilson, a young Belfast merchant. Dr. John R. Hamilton, a surgeon in the British Army and champion of India in 1870. Josiah K. Milner, a Dublin merchant. He lay upon his back and rested the muzzle of his rifle between his toes; the rear sights being on the butt. Edmund Johnson, a Dublin jeweler, who shot in the same position as Milner, and Captain Philip Walker, a British officer. All the team shot in the prone position with the exception of Milner and Johnson.

The match took place on September 26, 1874. The day was hot and dry with considerable mirage; the visitors finding the heat rather excessive. The attendance was large and rapidly increased during the day as the newspaper telegrams led the public for the first time to realize that there were prospects of an American victory.

I do not think that I ever can recall a busier or more exciting day.

The targets were arranged in groups of two, numbers 19 and 20 for one team, 16 and 17 for another, 18 being removed. Major Leach won the choice, and took 16 and 17, toward the inside of the range. The wisdom of this choice was manifested at the 1,000 yards, where the shade of a large tree made it very refreshing to his men. The captains of the teams each named a man to sit by the marker at each target, to see that he performed his duty faithfully. Each also named a man who sat with a telescope by the scorer and saw that the scoring was correct. Several times during the match a doubt occurred in regard to a shot. In such a case the firing ceased, and the markers with their watchers came out and inspected the target. John Rigby opened the match, making a "center," scoring three. Lieut. Fulton followed with a "bullseye," scoring four; Cap-

tain Walker followed in the British team and made a miss. The Americans shot steadily and well, and at the end of the firing at 800 yards their score was 326 out of a possible 360, the Irish score being 317. Fulton, of the American, and Hamilton, of the Irish, each made 58 out of a possible 60, that is, 13 bullseyes in 15 shots. As the firing continued, the crowd, which numbered 5,000, extended itself in a solid mass along the rear of the teams and at an angle to the front on each side for a distance of nearly 500 yards. Behind the teams large bulletin boards were erected upon which the score made by each shot was posted. Everybody, however, had a score book and kept his or her own score. When a shot was fired there was silence until the smart spat of the bullet upon the target would come back at an interval of about three seconds. Then there would be a murmur in the crowd like the sound of a gentle wind "He's on." If the white disc was shown, everybody would say "bullseye," with the effect of a sort of a roar. If it was a center or a miss, the sound was much milder. At the finish at 800 yards a recess was taken during which lunch was had in a large tent.

After lunch the riflemen returned to work at 900 yards. Here both teams set themselves to work in dead earnest, the Irishmen to wipe out the nine points which stood against them, and the Americans to raise their advantage as high as their skill would permit. The Irish gained at this distance, and at the end of the fifteen shots they had made 312 points while the Americans had scored but 310, leaving the latter but seven ahead. Fulton and Yale shot remarkably well at this distance. Dakin, on the other hand, did not shoot up to his average, having one miss and two outers, making a score of only 45.

The teams then moved to 1,000 yards. Here the tension became extreme. It was known that the Irish were better at this distance than the Americans, and it was felt that only by extraordinary efforts could the Americans maintain the lead they had. The friends of each team gathered behind them and cheered to such an extent that both Major Leach and myself were obliged to go together and to beg the crowd to desist for fear of affecting the men they were cheering. As shot after shot was fired the anticipation became more and more intense. Hepburn and Dakin of the American team both began with misses, and Dakin made two more in his fifteen shots, making his score only 41, the lowest score in the match on either side. Fulton, however, came up most nobly under the pressure. He made 56, making a total record of 171, which was something at that time unparalleled, and which really saved the match. Milner made a miss, which was really a bullseye on the wrong target, a mistake which brought down upon him the opprobrium of his friends and nearly broke his heart.

The Irishmen shot with greater rapidity than the Americans. This was not because the muzzle loaders could be shot faster than the breech loaders, for the contrary was the case. The Americans, however, shot strictly under their team system, and when two men were lying down to shoot one held his fire until the shot of the other man was recorded so as to have the benefit of the experience which it gave. They also frequently consulted as to what was the cause of a bad shot, particularly at 1,000 yards. The Irish, on the other hand, frequently fired simultaneously at their two targets and consulted much less than did the Americans, each man relying upon his individual judgment. When the Irish had finished their score it was found that they were ahead. One by one the last of the Americans shot, and the lead which the Irish had obtained was obliterated. When Dakin fired his last shot and made a miss a hollow groan went through the American ranks. Col. Bodine was the last to shoot. He had been selected with special reference to his steadiness under excitement and nobly did he justify the confidence that had been placed in him. The Irish score was 931, the American 930. If he struck his target his team would win by one point. If he missed the match was lost. The crowd had pressed inside the ropes, and formed a long V extending for several hundred yards on each side of the firing point and leaving scarcely room enough to make it safe to shoot. All held their breath and fastened their eyes on Col. Bodine. He had been kept in ignorance of the exact condition of the scores, but he knew perfectly well that everything depended upon his shot. Calm and imperturbable, as if engaged in ordinary practice, with blood dripping from a handkerchief in which he had tied up a cut on his hand received from a broken ginger-ale

bottle a few minutes before, Col. Bodine stretched his long form out into his familiar position and taking a long, steady aim fired. Every one of the thousand pairs of eyes present were shifted from the man to the target, a little point half a mile off. Breathless silence prevailed. Then came the spat of the bullet accompanied by a roar from the crowd, "He's on," and then came slowly into sight a large white disc which showed that a bullseye had been made and the match had been won. The disc lingered apparently lovingly upon the center of the bullseye, the most charming and welcome sight I think I ever witnessed. America had won by three points! When the result appeared pandemonium broke loose. The sky was darkened with the hats which were thrown into the air. Men danced and thumped each other on the back and whooped and yelled and acted like crazy people. I remember I found myself standing on a chair behind Bodine waving my hat (which, however, I had sense enough to hold on to) and leading the cheering. But to this day I have not the remotest idea of how I got there from the place where I had been standing behind him watching the wind flag to give him warning in case there should be any change. A forest of hands were stretched forth from every side towards the Colonel, who was plainly very much embarrassed as well as astonished by these great demonstrations. Everybody looked upon him as the savior of the national honor, and he really well earned the title, the "Old Reliable," by which he has since been known. After the excitement had ended and the throng scattered over the ground looking for their hats had to some extent dispersed, the winning team was called together and Lady Massareene, in a few appropriate words, pinned upon the breast of each man the badge intended for the winning riflemen. As each was addressed he said a few words of thanks. The most characteristic of these was probably the remark of Hepburn "that what gave him most pride and satisfaction was to think that he had made with his own hands the rifle which that day had made the highest score ever made in a match."

While the score made by the Americans was beyond their anticipations, the same was the case with their opponents, who averaged 155¼ per man.

It is gratifying to know that not the slightest question arose among any one connected with either team in regard to the perfect fairness with which the match was conducted. The marking, scoring, and management were unexceptional, and everything was managed on both sides in the most sportsmanlike and honorable manner. Though sadly disappointed by the result the Irish team accepted their defeat with the utmost manliness, and while conceding that it was unexpected to them, frankly acknowledged it was fairly and honorably won.

It would be difficult to adequately estimate the great impetus to rifle shooting in the country which came from this first international match. Before the match took place Creedmoor was almost unknown, and but little interest in rifle shooting existed in the National Guard or in the army and none among the public. The result was an enormous advertisement. Rifle ranges and rifle clubs were started all over the country.

The next year, 1875, the Irish team challenged the American team for a return, to be shot in Ireland. The contest took place at Dollymount, near Dublin, and, although the Irishmen made a higher score than had ever been made in Great Britain, they were defeated by thirty-eight points, 967 to 929.

In 1876, the Centennial year of America, another international contest was held at Creedmoor, wherein the American team won the Palma trophy over an Irish team by 22, a Scotch team by 63, an Australian team by 64, and a Canadian team by 203, mainly, I believe, owing to the manner in which their splendid team organization enabled them to follow the fluctuating wind.

In 1877 a British team again appeared at Creedmoor. In that contest the Americans made a grand total of 3,334 to their competitors' 3,242, with the result that in 1878 no contestant for the Palma appeared, and the American team shot a "walk-over."

In 1880 an American team again shot at Dollymount, in Ireland, making 1,292 points against the Irish 1,280. The shooting in this match was superior to anything which had previously been known; making in 270 shots, 221 bullseyes, 41 centers, 7 inners, one outer, and no misses.

Col. E. S. Sanford (reserve) Lieut. H. Fulton L. L. Hepburn G. W. Yale

Photo. by Rockwood, N. Y.

Col. John Bodine Gen. G. W. Wingate Brig. Gen. Thomas F. Dakin Lt. Col. H. A. Gildersleeve I. T. B. Collins (reserve)

THE FIRST RIFLE TEAM TO REPRESENT AMERICA IN INTERNATIONAL SHOOTING, WINNER OF THE FIRST MATCH AGAINST THE IRISH TEAM, 1874.

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THE WEDDING OF BEAVER EYES

By Emerson Hough

THE tribes had gathered and fought the white men, killing their long-haired leader. Days before the battle the trailers had told the general he would find the Indians, and find more of them than he wanted; yet the etiquette of their calling kept them with the column before the battle. After the battle had begun they could not get away; therefore they remained and became heroes. The trailers had seen much of killing in their time. They talked of it now. It was a Valhalla journey for these men. Their bloody and dirty faces were stolid, but lit by a certain fire. Pride of conflict, joy of heart, had taken hold of them all. They sang, contending with each other in deeds of unconcern. The blue-eyed man, knowing that all was over, at last pushed out quite in front of the willows and knelt in the grass, uncovered. Here he cut cleanly out of his saddle a big Indian who rode back and forth across the front of the thicket. Again loading, though now struck by the fire of the Indians, who wheeled and charged back again, he killed yet another Indian, close up to him, one who rode a yellow dun horse. Then Walking Dog shot him down, his head rolling back where he fell, as did those of the Indians dragged away. Then Billy shot Walking Dog. Then the others of the trailers, whites, breeds and reds, came up to the edge of the thicket, and they and the charging Indians shot at each other for a while. Two things brought an end to it; the supply of trailers ran out, and at just about that time the charging Indians, attracted by a great outcry a mile farther back up the valley, swept off and away to join in better paying business with the main village, which now had many officers and rank and file to strip.

Smilingly, Billy hitched around his cartridge belt and filled the loops in front, let down the hammer of his gun and stepped out of the willows to find a drink of water. As he passed by the blue-eyed man, who lay with his face turned up and his yellow hair trailing off into the yellow grass, Billy for a moment lost his smile. Stooping over the fallen body of Walking Dog he thoughtfully cut off an ear and put it in his pocket.

II.

After the fight, and after the arrival of the supporting column, the new commander called together the trailers, the three who were left from the fight at the willows, a few more who had not been in the fight, and a few more new ones, Snakes and Rees, just as good as the old ones. To these the commander explained that the ——— Regiment would now need recruiting, pretty much to the extent of a new set of officers and men, and incidentally a new supply of horses and mules. The ——— Regiment was always needing recruiting. This time it was to be recruited at Fort Lincoln. The trailers were to proceed to that post, in no hurry, but with such speed as would bring them there in the course of the next few weeks.

Two young Ree scouts, good men, but very homesick, had asked permission to go home to see their people, this meaning that they were to leave the direct route by a few hundred miles, no very great distance on the plains. It fell out that Billy went along with the Rees to their village. He took with him a few horses which he had incidentally stolen somewhere; one of them a black runner, a very good buffalo horse.

Billy and the two Rees rode along together over the blistering plains, a few hundred miles, day by day, not talking much, because they saw all there was to see, and each knew that the others saw it all, so there was no need to talk. Billy did not speak their language, nor they his; not that this would have prevented their conversation had they cared to talk. Billy did not know where their village was, and he did not ask, because he knew that the Rees knew, and that they would go to it in due time. His arm pained him somewhat, where a bullet had cut it across, but this was only incidental. Nobody referred to it, though when it was necessary that meat should be killed, the Rees would leave Billy and go out and do that themselves. Billy endured the pain of the

arm as part of what he got for the five dollars a day and all the horses he could steal.

Billy was a half-breed, a tall and sinewy, good-looking and good-natured half-breed, who had been scouting with the army ever since he was sixteen years of age. As he rode with the silent Rees for the fifth day, the white half of Billy began to be bored with the monotony. The red half of him was non-committal. Both halves of him were very hungry. The Rees would not stop to hunt that day, but made signs that on that night they would sleep in their village. This meant that they would get plenty to eat then, which was easier than to go out and kill and cook plenty now. Billy demurred not, but chewed tobacco. By noon his tobacco was nearly gone. Reaching into his pocket for a few crumbs, and feeling there something tobaccoish, he absent-mindedly drew it out and took a bite at it. This substance, being the ear of Walking Dog, afforded no real satisfaction. Billy was first disgusted, and then amused. Thoughtfully restoring the curio to his pocket, he rode on; but ever and anon, for the next dozen miles, he smiled cheerfully, as one who was blessed with happy meditations.

"DOWN THE SLOPE AT FULL SPEED."

Presently the two Rees pulled up their horses and dismounted. They untied bundles from the backs of their saddles, and brought forth new moccasins and leggins. From little bags at their necks they produced pigments, and shortly appeared in solemn dignity, nobly barred with the grim colors of war. Billy did not paint, but he lent a

couple of scalp tufts to Crane Caller, and told him to lie all he liked about them. Then they rode to the crest of the hill beyond which lay the village of the Rees, and thence all set heels to their horses and went down the slope at full speed, driving in their loose horses, firing their guns, and yelling in great style, as have the triumphant warriors of all times, from Rome, Gaul and India down.

III.

Not lacking in hospitality were the Plains people. The two Ree scouts soon disappeared in the lodges of their families, leaving Billy sitting alone on his horse in the middle of the village, for the moment abandoned by the sweep of welcoming ones. For him the situation seemed not much changed, both halves of him still being very hungry, though the red half was non-committal and the white half slightly amused; yet, it being etiquette to wait, he waited, hungry but confident. Presently an oldish squaw came, and without saying a word to him took his horse by the bridle and led him some distance through the village. "I'll just follow you, old girl," said Billy to himself; and, so doing, the procession at length halted in front of a very large and fine lodge, a sort of brown stone front habitation, relatively speaking. The woman signed for him to enter, and he did so, stranger as he was and ignorant of the local tongue. Sioux, Crow, Cree, Piegan, French and English Billy could speak, but he did not know Arickaree. He knew chiefly that he was hungry, so he stooped down and entered the lodge.

It was dark inside the dwelling, no fire being lighted at that hour, but as Billy's eyes became accustomed to the gloom he made out, near the door (the post of little honor) the figure of an old woman, and in the back of the lodge (the post of greatest honor), a large and dignified Indian, evidently master of the house and a man of some consequence. Billy, being versed in the etiquette of good society, made care not to disturb the ashes of the fire, neither did he pass in front of the tripod at the rear of the lodge, where hung the sacred bundles, the "medicine" of the family. The chief doubled his fist and struck it upon the robe beside him; whereby Billy knew that he was invited to take a seat, which he did, remaining there, very hungry but very polite. Presently the chief put his two forefingers together parallel in front of him. Billy knew by this that the chief meant to say that they two were to be friends. "Good," said Billy, in equal silence, extending his hand in front of him, palm down. None the less he was very hungry.

The chief sat gravely silent, showing very becoming dignity for what seemed to Billy a very long time. Then he had a sudden afflux of Indian conversation, on Indian lines of thought. "Me, you see me, here," he said, mutely and in signs, "Very poor, awfully poor, in fact a deadbroke Indian" (raising his forefinger and scraping it with the other forefinger; as who should find a bone with no meat on it; he was that poor.) "I am about the poorest Indian ever was." "You old liar," thought Billy, "I wonder what you want."

"The Sioux came down on us not long ago, while we were out hunting," said the chief (drawing his hand across his throat to say "Sioux").

"Uh-huh," said Billy.

"They took all my horses." (Two fingers a-straddle of another finger, the sign for "horse;" otherwise, the "clothes-pinned animal," which is "horse," as plain as the nose on your face).

"Uh-huh," said Billy.

"No, not one horse have I left with which to run the buffalo." (Crooked finger on each side of head for "buffalo").

"Uh-huh," said Billy.

"Therefore I am ashamed. My heart is small, it is weak, it is poor. When I go out to hunt I get no meat, because I have no good horse to run the buffalo. I am ashamed before my people."

Grave silence on the part of Billy. After a diplomatic pause the chief resumed, still, of course, in signs.

"My friend and brother, my great warrior, is it possible that you happen to have such a thing about you as a good running horse?"

"Brother and friend," said Billy, in signs, "Horse, me, my horse, outside, see? Black horse, the black one, you comprehend? Yes, he's a good runner, a fine buffalo horse. That black horse, me, you, I make a present of this horse to you. (You old fraud, you. But I'll steal him again, anyway, when I go away, so we'll let it go at that.)" This last was in English and to himself, and as he said it, Billy smiled most amiably.

Instantly the demeanor of the chief changed. His solemnity vanished. He grasped Billy by the hand. Best of all, he gave orders in a loud tone of voice to the old

woman sitting near the door, and to Billy's great delight the squaw began to make a fire. In due course she set before him a large pan of meat, corn and beans, after the fashion of the Rees, who trucked a bit as well as butchered. Thereupon Billy ate his four or five lost meals in one, and, finally, bringing his finger up level with his lips, signified that he was full up to that altitude.

"THEN BILLY SHOT WALKING DOG."

Meantime much calling and shouting and joymaking was going on in the village outside. Billy was tired and sleepy, and now wished very much to roll over on the robes and go to sleep, but his host gave him no opportunity to do so. He was haled hospitably forth and taken visiting. At every house where they paused they were offered dishes of meat and corn and beans, and as gentlemen they must eat. Billy wished heartily that he had his hunger back. But everywhere he accepted his rôle as returning brave, and acted as became a hero. As evening came, and after Billy had finished his twentieth meal for the afternoon, his host at last conveyed him back to the lodge where he had first been received. "Sit down here in this house," signed the chief. "Here you shall sleep. This shall be your home." But first," he added hospitably, "we really must have just a bit to eat, you know, you being my guest." Nor could Billy evade this. As they sat at table dining, which is to say, as they sat on the edge of the robe bed, about the fire, holding on their knees the wooden and horn vessels, they became conscious of the arrival of visitors at the door. The skin flap of the door was pulled aside, and there was intruded the head of an Indian girl; a very sleek, black head, with cheek bones nicely reddened with paint. The owner of the sleek head and round face came in silently, save for the tinkle of her glass beads and brass cylinders and bits of copper wire, and seated herself ungreeted and ungreeting upon the robes at the side of the fire, at a point between Billy and the lady of the house. The full dress, or woman's tunic which she wore, made of the skin of the

mountain sheep, was white as snow, and covered with scores of elk teeth, which rattled. Her jewels of copper and glass shone as bravely in the firelight as ever flashed the gems of high dame of any land at dinner of state. Nor was ever heard of any maiden smoother and sleeker, nor of eyes any brighter. There was no introduction at this dinner party. Of course, Billy recognized the introduction of the roof, but at the first opportunity he faced about to his host and asked him, in the silent language of signs, what was the name of the girl in the elk-tooth gown.

"I didn't quite understand you—her name, you know?" said he, querying with his undecided fingers shaken loosely in the air.

"Beaver Eyes," said the chief; and Billy at that moment swore that Beaver Eyes was the one maid in all the world for him.

IV.

Billy might have been considered fortunate. He had stepped at once into the best society of the city. He had been approved as a man and applauded as a hero. He had been invited and fêted by the best families, and treated with every mark of the most distinguished social consideration. The making of a hero sometimes overleaps the slow circles of evolution. Billy was utterly happy. The Ree corn and beans palled upon him, it is true; yet had he not seen Beaver Eyes? Had he not urged his suit? Had he not promised many things? Had he not touched her hand?

For two weeks the feasting continued in the village, and both Billy and the young Ree scouts had forgotten about the orders to report at the recruiting post. Each day the crier went abroad, calling out to all persons to assemble at the lodge of this or that person anxious to entertain the returning braves. One day the herald invited by those presents all members of good society to be and appear at the residence of Wolf Dog, the headman. Naturally, Billy could not fail to attend this function, and after dining he participated in the dance.

The red half of Billy was now rapidly getting the ascendency. Nude to the waist and hopping like a brave, he joined the circle of dancers as one to the manner born. In the dark circle of spectators which surrounded the dancing men were eyes that saw more than they seemed to see. Color, light, music, beauty—all the inspiration of the grand ball was there. Last and most potent factor in his exaltation, Billy saw, as he trod the repeated measure of the dance, a sleek, black head, half hid in a far corner, and a shoulder over which hung the white fabric of an elk-tooth decorated gown. Never in any village did Billy dance as he was dancing now. Yet dignity must be preserved. No glance into that corner for many a long moment. None, until that one which discovered the sleek head and white tunic to be gone! "I shall seek her in the conservatory," thought Billy; or thoughts in Plains language equivalent to that.

But though he sought her beneath the silent stars, he found her not, and trod disconsolate the moonlit street. Afar came the sound of galloping, and thither Billy turned his feet with the rapid curiosity of the scout. He, the stranger within the gates, was the first to receive the messenger and to discover that he was a friend; not a messenger from the King, but a messenger from the K. O., asking why in the name of all saints dwelling west of the Missouri River, Billy had not come into post with the other scouts. The red faded out of Billy's heart. He became white again, and subject to the call of duty. Telling the rider to wait, he hurried off to find Crane Caller and order him to prepare to march far from the sound of this revelry by night.

Billy himself could never explain how it was that he went the wrong way to find the lodge of Crane Caller. He was born and raised in an Indian village, and had lived many years among the tribes. The dark cones of these monotonous abodes had each an architecture to his eye, and the heraldry of the shields before the doors was obvious to him. Sometimes, when he was feeling more Indian than white man, he would explain this blunder by saying that it was his "dream" that led him apparently wrong, but actually to his own best interests. What Billy did was to go to the lodge where he supposed Crane Caller lived, and to look in at the door. Seeing in the foreground an old woman who was in the act of invoking her patron saints, Billy delicately withdrew, and passed around to the rear of the lodge, to the point where he presumed Crane Caller was lying. Reaching a hand against the form

which lay close to the wall of the tepee, he gave a push and a low word of warning. The woman at the fire sprang up with a sudden call of suspicion. This old lady was a dreamer of dreams, and was always hearing ghosts walking outside the lodge at night. Now, at last, she thought that she had found her ghost. But to her voice replied another voice, also in affright, and as he heard it Billy went cold along his spine. It was not the voice of Crane Caller, but the voice of a woman—a voice which he had heard and had not forgotten, which he never could forget!

The dancing at the great lodge had now begun to spend itself. The East was growing gray, as sometimes it grows after the white men's dances. One by one little groups began to scatter through the village. The howl of a dog rose here and there, and a ten-fold coyote on a neighboring hill shrilled in whining salutation. Voices sounded variously, footsteps drew nearer and passed by. Behind the lodge Billy cowered and lay still, fearing not for himself, but for the owner of the voice that he had heard.

A little dog barked at Billy's legs. The old woman, timorous but exultant that she had found her ghost, peered around the edge of the lodge. But Billy mounted on a certain swift black horse, was riding to the lodge where Beaver Eyes was weeping. Billy had never heard of Lochinvar, but he knew how to ride. The black horse carried the two away, figures rapidly lessening in the growing dawn.

V.

The little war was now waning. Numbers of Indian prisoners were coming in, fresh from a recent round-up of the traveling bands, each charged with the murder of a few dozen settlers. These prisoners were put in irons, to their supremest humiliation, and were confined at the Post in a great log building, where they were chained to the wall in a long row and kept under guard. In truth it must be said they did not employ their time in chanting their death songs, but seemed most concerned about tobacco.

"Tobac?" asked Yellow Horse, the chief of his band, as Billy passed near him. "Heap tobac!"

"Tobacco? Why, sure, old man," said Billy, and dug into his pocket, bringing forth the scent and apparently the substance of the coveted weed. Eagerly Yellow Horse filled his mouth, resolved that no portion of that piece of plug should ever return to its owner. But he bit against it only once. He held it before

"THE BLACK HORSE CARRIED THE TWO AWAY."

his face, a grin of rage convulsing his features. Billy grinned also, and made a pleasant gesture, a sweep of an imaginary knife at his own ear.

"Walking Dog, *your brother*!" he said.

Quick as a cat, the Indian stooped, drew back and reached forward. He had doubled the loose length of his chain and struck out with it as far as he could reach. The end of the flying iron caught Billy above the ear and felled him instantly. Private O'Brien joyfully clubbed his musket and knocked Yellow Horse also insensible. In about five minutes Billy came to his senses, borrowed a musket and shot Yellow Horse as he sat dazed in his chains. In five minutes more Billy was himself in chains, and the K. O. swore he would make an example of him this time, for he had had enough of his escapades.

One morning the corporal and three privates escorted Billy to the headquarters office under guard. The K. O., after his bath, and his libation, and his breakfast, had come down to the office early to take up the case of this scout; this half-breed who was always into trouble. He dismissed the corporal and the privates, dismissed the orderly and the quartermaster, called Billy to the table and looked him sternly and then softly in the eye. He gave Billy a rifle and a roll of blankets, and a roll of cash (which latter the K. O. could really not afford to do), and he secretly bade him goodbye as one school friend does another, and told him to go back to the guard house at once. Incidentally he mentioned that the end of the company street fronted due north.

It is all very well about discipline, but when men have often been under fire together, even though that may have been because they could not get away, the matter of an ear here or there, or even of an Indian, cuts far less figure alone in office than it does in an official report. The K. O. shook hands with Billy, and swore goodbye at him. And then Billy and Beaver Eyes disappeared. They faded away into the West, which at that time was a very large and lovable country.

VI.

Years after the time when Billy and the fugitive Arickaree maiden disappeared from view there came to be established upon a certain Indian reservation in the far Northwest, many hundreds of miles from the old military post and far away from the great battle ground (where the men who made the mistakes became heroes, and the men who did the fighting became forgotten in due time), the cabin of a certain tall and not ill-looking half-breed, who always smiled, and whose name was known as Billy. He had lived for a long time here in this cabin, with his "woman," who was called Beaver Eyes. Their family had grown up about them, and all seemed happy and prosperous in their little home, in this wild corner of the mountains, tucked up under the sweeping arm of the Rockies. There had now come, all over the West, the mysterious and fascinating West of the past, the time of new things and new ways. Schools and churches had found even this far-away reservation. The buffalo were long since gone. Cattlemen tried to steal, and the Government tried to buy all of the reservation which was good for anything. The people were not permitted to worship in their own way. They dared not pray to the sun, because the white man said that was wrong. They must pray to something else, which they could not see, and must believe things which they could not understand. The priest at the Mission said that warriors must put away all their wives, or at least all of them but one; advice the justice of which it was difficult for the people to see.

Especially with the young men and the half-breeds did the priest labor, seeking to get them "legally" married to their wives. Many was the long journey the good Father made to Billy's cabin, trying to induce him to attend the Mission church, and beseeching him to stand before the altar.

All these questions seemed strange and puzzling, even to the white half of Billy. He had come of a time of war, had grown up among warriors red and white, and he could see no support for the doctrines of unselfishness, since all nature had taught him the lesson of continual contest. Yet, perhaps there was, somewhere back in the white half of Billy's brain, something of philosophy. Perhaps he remembered that Beaver Eyes, who had first known and loved him when he was a hero, had not forsaken him when he was cast down, had been faithful to him in sickness and in health, cleaving to him alone through all the years. Was there not in this some hint

of that which the white priest was trying to teach? Was there not something of self-forgetfulness here, under the roof of his own cabin? Beaver Eyes was silent regarding herself through all these years, whether splitting wood in the past or fabricating pie of Governmental dried apples in the days of progress. Nor did Billy ever trouble her with philosophy.

The double current of Billy's blood served him well. One day he went to church where the white men worshipped. Then he went home, and the next morning, when the sun made first pink and then golden the visible throne of the inapproachable, the lofty and majestic peak of the Great Chief mountain, the pagan half of Billy rose in unconscious adoration. Yet it was on that day that he sent word to the priest that he was willing to be married to his wife!

VII.

The rumor of Billy's wedding had gone abroad, flying in the mysterious way of the wild land, all the people being bidden to come. It was a grand wedding, without doubt. To be sure, there was no champagne, but there was five gallons of alcohol, which is equally purposeful. The priest was near to calling it no wedding after all. For Billy stood forth clad from head to toe in the old tribal dress which was now discouraged or forbidden among the tribes; and his wife, Beaver Eyes, wore a white tunic of the skin of the mountain sheep, covered with a rattling mail of teeth of the elk; a garment which the traders would have given many cattle to possess. They made a picture from the past, as they stood before the teacher, who was trying to bring new truths into the world, regardless of the high cynicism of the Great Chief mountain, which looked down upon this ceremony as it had done upon those of the red men in centuries gone and forgotten.

It was a grand wedding, and its last scene was not done until dawn of the following day, when Billy stood at the door of his house, looking thoughtfully over many sleeping forms, and gazed out across the plain that lay before him.

Beaver Eyes had hung up her elk-tooth dress and had donned the calico of progress. Billy absently ran his hand across the skin garment till all the teeth and the little ancient cylinders of steel that adorned it tinkled and rattled again. They sounded the music of another day, a day gone by forever. "Beaver Eyes," said Billy, laughing a little uncertainly, "come here, old girl! Put it on. Put it on again! This wedding goes. It lasts till the sun goes down behind the mountain; and till it don't come up again!" And Beaver Eyes, dutiful as always, again put on her wedding gown.

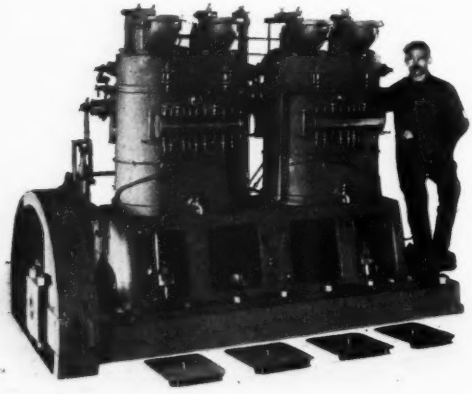
GAS ENGINES FOR PLEASURE CRAFT

By Henry R. Sutphen

THE salt of the sea is in the Anglo-Saxon blood, and so long as it tingles there, the royal sport of yachting must continue to flourish. "A wet sheet and a flowing sea," is there anything better in life than the lift of a streaming deck under one's feet, when the wind is drawing Aeolian harmonies from the tense shrouds, and the tiller strains under the hand like a restive horse at the bit? That is sport royal indeed, and happy are they who have the purse to pursue it! Is there one Englishman or American whose heart will not beat a trifle faster when the giant single-stickers *Shamrock II.* and *Constitution* thrash out beyond Scotland Light in the first heat of the glorious contest for the "blue ribbon of the seas?"

But yacht sailing proper is outside the province of this paper. My subject is the humbler one of the powered boat, a subject which may nevertheless recommend itself upon occasion to even the cockiest among the Corinthians; for the modern world moves fast, and whereas formerly, time and tide waited for no man, nowadays man has become impatient of delay. The hard-worked business man, who must measure his yachting, not by length of cruise, but by the number of its hours, cannot endure to be dependent upon the caprice of wind and tidal currents. He wants the pleasure

of sailing without being becalmed on a hot August afternoon ten miles from a lemon, and the ice-box empty. The solution of the problem is, of course, some form of auxiliary power.



160-HORSE-POWER GAS MARINE ENGINE.

Yachting under steam power is popularly supposed to be an expensive pastime and relatively it undoubtedly is. The cost of maintaining some modern steam yachts, with big crews and coal and steward's bills, is only to be borne by the extremely well-to-do. Floating palaces the newspaper reporter loves to call them, and those who desire to live in palaces have to settle royal bills, and so long as the choice lay only between sail and steam power, the poorer man was perforce obliged to content himself with a Long Island catboat or a St. Lawrence sailing skiff. But nowadays the gas engine offers itself as a practicable marine motor, and forthwith a new field, albeit a watery one, is opened up to the amateur sailor. Perfection is not to be looked for in the early developments of a new idea, but already the manufacturers have been able to place upon the market practical powered boats, whose initial and operating costs are far below the best results heretofore obtained in small and moderate-sized steam-propelled vessels.

The first successful gas-engine boat to be placed upon the American market was brought out only so recently as 1888, and was of the type familiarly known as naphtha launch. Up to the present time over two thousand of these boats have been built and put into commission, their use being confined almost entirely to pleasure sailing on lakes and land-locked harbors. The average size of a naphtha launch is not more than thirty feet and its type of motor has never come into general use as an auxiliary power on large cruising yachts. It is only within the last few years that the explosive or hydro-carbon motor has been fully exploited and developed. To-day, it is the one satisfactory power for both pleasure and business vessels of moderate size. It has the advantage over the naphtha motor, both in initial and running cost. To make this clear the reader should understand the fundamental differences existing in the two systems.

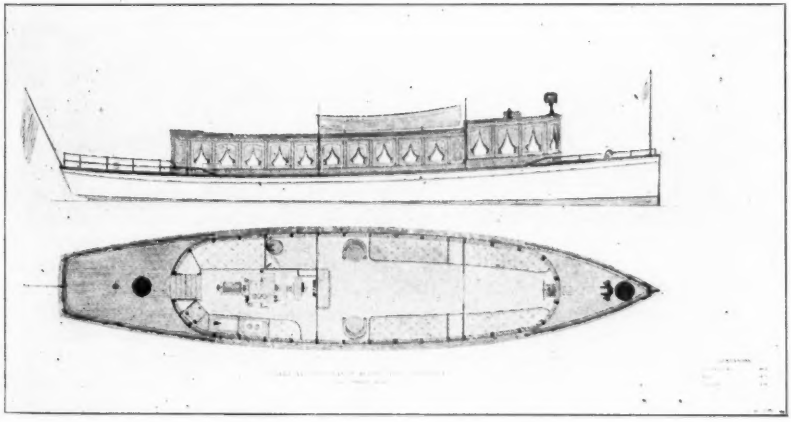
The naphtha motor works upon the principle of the steam engine, except that naphtha vapor is generated in the boiler instead of steam. This vapor is introduced under pressure into a cylinder where it moves a piston, precisely as in a steam engine. The heat necessary for the generation of this vapor is supplied by burners using naphtha as fuel. The motor therefore consists of boiler and engine, or two units of power. The hydro-carbon motor also uses naphtha or gasoline, but not as a fire fuel. The gasoline is drawn off from its tank into a small piece of apparatus called a vaporizer where it volatilizes into gas and is mixed with a certain proportion of air. This mixture is drawn into the engine cylinder and there compressed and exploded by an electric spark. The expanded gas drives down a piston just as in a steam engine, but since the gas is not under pressure until after it is introduced into the cylinder, the motor is properly engine and boiler in one piece, or one unit of power. It is evident that the explosive motor is much the simpler piece of mechanism, with fewer and stronger parts, and consequently, less expensive to manufacture and keep in repair. In the actual running it is much more economical to use gasoline in an explosive engine than to employ it both as fuel and as a vaporizing base. In the

matter of horse-power per gallon, the comparison is all in favor of the hydro-carbon engine.

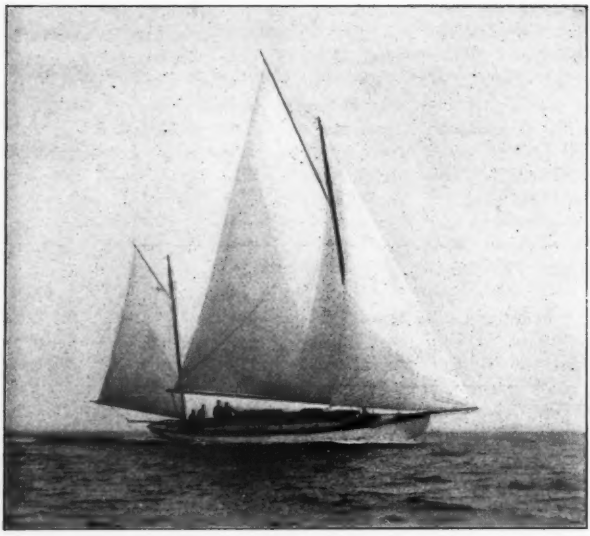
Then there is the important question of safety. Both systems use the highly inflammable naphtha or gasoline as a source of power, but the methods of application, as we have seen, are widely different. The vapor engine requires that the naphtha should be carried under pressure to the fuel tank, and accordingly the slightest leak or overflow may be dangerous. The flame from the boiler burners coming into contact with free naphtha, may in an instant cause the whole boat to be swept by fire. With every precaution taken the danger must always exist. The good workmanship of the manufacturers and the skill and attention of the operator may reduce it to a minimum, but it is still there. In the explosive type of motor, the gasoline is not carried under pressure and there is no outside flame or fire; consequently, the risk of fire is practically *nil*.

To show how rapidly the development of the explosive motor has proceeded, it may be noticed that at our World's Fair in 1893 the largest stationary gas engine exhibited was one of thirty-five horse-power, and the biggest one in operation did not exceed one hundred indicated horse-power. At the Paris Exposition of 1900 a gas engine of one thousand horse-power was shown in operation, the full power being derived from a single cylinder making but one working stroke in four; and in this country motors whose indicated power must be written in three figures are in every-day use. The monster Paris motor had a single acting horizontal gas cylinder, fifty-one inches in diameter, directly connected by a rearwardly extended piston rod to a double acting air cylinder, sixty-six inches in diameter, with a stroke of fifty-five inches and a normal speed of eighty-five revolutions a minute. The machine, imposing in all of its proportions, occupied a space fifty-four feet long and nineteen feet wide, and its maximum hight above the floor level was thirteen feet. Its total weight was one hundred and twenty-seven tons.

The largest marine explosive engines in existence are those recently built for the Holland submarine torpedo boats, now in process of construction for the United States Government. This type of motor embodies the latest results in steam engine practice, with the substitution, of course, of gas vapor for steam. The engine not only furnishes the power for propelling the vessel when sailing on the surface, but also operates the dynamo which charges the storage batteries used for driving the screw when the boat is submerged. The cost (for fuel) for a gas engine of this capacity is $1.92 an hour, a little in excess of that required for a modern steam engine. But this slight additional operating expense is more than offset by the fact that no coal bunkers or water tank are necessary, an important saving of valuable space. More-



PROFILE AND DECK PLAN 50-FOOT LAUNCH WITH GAS ENGINE.



AUXILIARY YAWL WITH 10-HORSE-POWER GAS ENGINE. SPEED 7½ MILES PER HOUR, WITH POWER ONLY.

of auxiliary power to the sailing yacht and (commercially speaking) the deep sea fishing smack. The illustration shows what is perhaps the most popular and all-round useful type of small cruising craft—the auxiliary yawl. This type of boat may be either a fin keel or fitted with a centerboard, the former being directed to deep, and the latter to shallower cruising grounds. Fitted with an auxiliary hydro-carbon motor, the fortunate yachtsman is entirely independent of wind and tide; at any moment that it pleases him he may up anchor and away. "Paddy's hurricane" and "Whitehall" breezes have no terrors so long as there is oil in the fuel tank, and as gasoline can be obtained everywhere, there is no excuse for anyone to follow the pernicious example of the foolish virgins. In a yawl or schooner of forty to sixty feet in length, the space required for a motor of sufficient power would be approximately six feet by three with a hight in the clear of five feet. The engine room is preferably located aft of the cabin and the weight of the machinery may be of distinct advantage in increasing the vessel's stability.

over, one man can easily manage the engine, neither stokers nor coal passers being required. There is neither boiler nor firebox, a cool engine room is assured, an important consideration in a small vessel, and an obvious advantage in a pleasure yacht or submarine torpedo boat.

The wide radius of action is, of course, a main factor in the making of extended cruises, such as from New York to New York via the Atlantic Ocean, the Gulf of Mexico, the Mississippi River, the Great Lakes and the Hudson River. Such a cruise is an ideal one for a small yacht or launch of three or four feet draught. Starting from New York in midwinter, one may spend a month or six weeks in cruising along the beautiful waters of the Atlantic inside route to Key West; thence through the Florida Keys to the bayous of Louisiana, coming up the Mississippi with the strawberries and drinking in the first break of lovely spring on the Lakes and the St. Lawrence. There is no such trip in all the world for the hunter, the angler, the naturalist or the simple sightseer, and it can easily be made in a fifty-foot launch inside of six months, the total distance being about eight thousand miles.

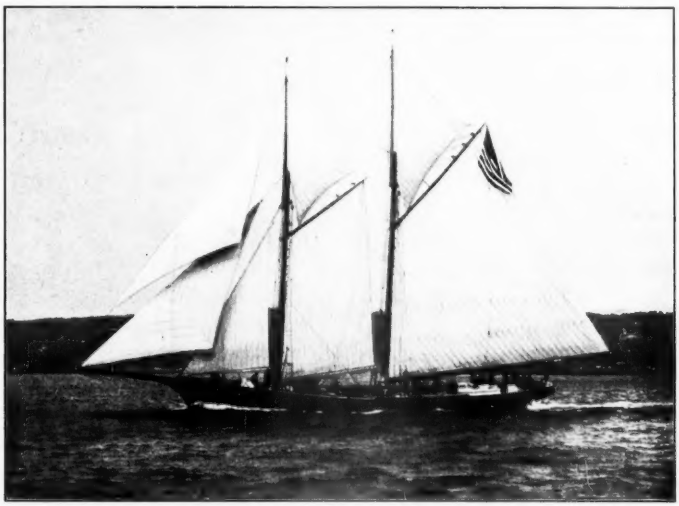
One of the most promising fields for the explosive motor engine is the furnishing

There is an impression among the laity that an auxiliary yacht must necessarily lose in sailing speed on account of the drag from the propeller. This, however, is not the case with the gas engine auxiliary, since it is a simple matter to disconnect the shaft from the engine at the point of the reversing clutch, and the screw then revolves freely as the boat slides through the water under sail. In actual tests, boats fitted with freely revolving propeller, sail quite as well as though the hull were entirely clear.

It is an interesting fact that the deep sea fishing industry is being revolutionized by the adaptation of the gas engine as an auxiliary power and the up-to-date fishing

smacks are being fitted with motors ranging from thirty-five to one hundred and twenty indicated horse-power. The mackerel schooner shown in the illustration has a remarkable record. The boat was built last year at Boston and the total cost of putting her in commission was $23,000. At the end of the season the owner found that his net receipts booked up $26,000, a very fair return upon his investment. On one particular occasion this very modern fisherman was becalmed in company with a fleet of his rivals. Starting up his engine, he was able to make his way into a large school of mackerel some distance, and his catch amounted to eight hundred barrels of fish, while his envious competitors put in their time whistling vainly for a breeze. Then returning to port he obtained the highest market price of $10.00 a barrel for his fish, and the practical efficiency of the gas engine in the mackerel business was amply vindicated. It is hardly necessary to add that his rivals have hastened to follow suit and five large smacks are already in commission for the coming season.

In the illustration on page 633 are given the plan and elevation of a fifty-foot gas engine launch, showing the space required for installation and the general scheme of arrrangement. Such a launch will accommodate four people besides the engineer and captain. Equipped with a sixteen horse-power motor, the launch would have speed of about ten miles an hour, with fuel tank capacity of sixty hours, and a six hundred mile radius of action. Incidentally, the engine drives a dynamo for charging the electric light system. For cruising yachts or launch the gas engine would seem to be the ideal auxiliary power. It takes up but little room; it is safe and it is reliable. In first cost it is moderate and in operating it is economical. The rich man can buy no better form of power, and it is not beyond the reach of the man of moderate means. On its merits, it is certainly entitled to consideration.



110-FOOT FISHING SMACK, EQUIPPED WITH 85-HORSE-POWER GAS ENGINE.

COURSING IN KANSAS AND NEBRASKA

By Charles H. Morton

KANSAS is pre-eminently a sportsman's State. This fact would be more generally known were her people able to give free rein to their sporting instincts, but she is also a busy and practical State, and it is of this hustling, working nature that her citizens partake. It sticks out all over them. They do not always have the time to indulge their sporting inclinations. but when they turn to recreation they are just as eager. And Kansas has her share of that which goes to create good, wholesome sport. It is a long stride from the bronzed wild turkey, which frequents the timbered sections of the southern border, to the *Scolopax wilsonii* of the northeastern waterways, but the vast area between is alive with a grand proportion of the game birds and animals of the western country. Along the prairie stretches of Stevens, Seward, Meade

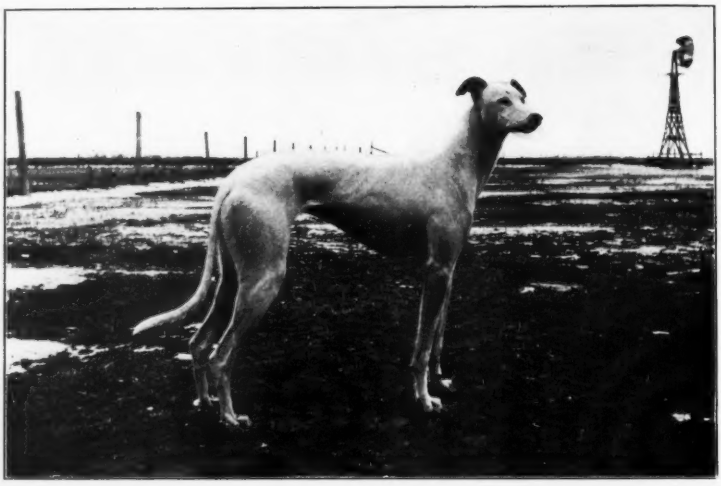
BENSHI AND TURQUOISE IN SLIPS FOR FINAL RACE, MANKATO, KANSAS.

RED DIAMOND.

and Clark counties, the timid antelope fraternizes with his brethren from the Panhandle of Oklahoma, and in the unsettled central and western portion of the State, the prairie chicken thrives, despite the concentrated efforts of Kansas gunners to relegate this characteristic bird of the rolling plains to those hallowed realms of tradition occupied by the bison and wild pigeon. Although the prairie chicken and the buffalo have disappeared before civilization's progress, these far-reaching and billowy prairies yet shelter wild and unconquered forms of life. The meadow-lark perches on the golden-rod's stalk, or sails away on his short, quail-like flight. The turtle dove swarms to the wheat stubble, or adorns the wire fences, mournfully musing over his vanished past. The upland plover, with mellow whistle, swings here and there over the pastures. Geese, ducks and snipe gather at their favorite ponds. Bob White, fat and prosperous, friend of the farmer and undisturbed by civilization's spread, whistles his "More-more-wet" in the early morn. From under your feet as you trample the tender young grass of the upland, springs forth a great, gray form, sidelong and hesitating, limping on three lengthy legs, with giant ears upheld like those of a Mexican burro. Sidelong and awkward but rapidly getting away. Your pointer confidently and unceremoniously gives loud-tongued chase—and that fourth leg comes down with its fellows to help them get the big gray body under way, while the atmosphere cracks open and closes behind a Kansas jack-rabbit of the largest size, who has just vanished from the anguished gaze of the most disappointed and humiliated bird dog in Jewell county.

But do not imagine for a moment that a western dog cannot give the western jack-rabbit a run for his money. When a brace of Mankato greyhounds go bounding over the course after a thoroughly frightened and industrious jack, there ensues the prettiest little race one might ever wish to see. Coursing is an old and always popular sport. It is also the cleanest of sports. The race-track is attractive to all degrees of humanity, but the coursing-stretch is adorned by the presence of the gentler sex and the best type of the gentleman-sportsman. You may bribe a jockey to "pull" a race for your benefit, but a pair of eager, sharp-eyed greyhounds, evenly slipped and matched, straining their superb muscles side by side and shoulder to shoulder, are each going to do their honest, level best to put forth that noble effort of body and limb

SILVER SIOUX.



PITTY ME.

so necessary to overtake the flying shadow just ahead. No bribery, no corruption there. Each is impelled by an all-conquering, overwhelming desire. The lithe limbs play back and forth, invisible almost, hurling the dogs fiercely onward. The long, sinewy bodies arch and straighten again with every bound, and ahead is the jack, fleeing for his life, not leaping high in the air and dodging here and there as he did at the start, but scudding straight ahead at full steam-pressure until forced, by close proximity of savage jaws reaching for his hind legs, to score a turn for one or the other of his pursuers. Well, good luck to him, if he can win "home," and if not—it is a speedy and a royal death.

Such a spirited race you might have wit-

DON PEDRO.

nessed at Mankato, Clay Center or Abilene in Kansas, and at Friend and Lincoln, Nebraska, during any of the Kansas-Nebraska Circuit Spring Meets. The first meet of the circuit was held at Abilene, April 3, 4, 5, under the auspices of the Abilene Coursing Association. The weather was atrocious, and on this account the attendance was light. Owing to exceptionally fine grounds the track was in splendid condition, and the jacks being in fine fettle the runs were each and all of the most exciting order. Of the aged dogs entered, more than half were either stake-winners or runners-up in previous meets. Among the puppies were some of the best bred dogs in the United States. Consequently the racing was thoroughly first class, and some great exhibitions of speed were given. At this meet Mr. Ray Virgin, of Utica, Nebraska, was most unfortunate in losing by death the speedy Red Diamond, who, when exercising, ran full tilt into the wire netting, breaking his neck. Red Diamond was a grandly-muscled red hound, and his wonderful coursing qualifications enabled him to win five first prizes in 1900. He was undoubtedly the "fast" greyhound of this year; a second Fullerton. The winners of the All-age Stake were Pitty Me, Messrs. Dayton Ragan & Grim's white hound, Lincoln, Nebraska; Mr. E. M. Kellogg's brindle Iowa Boy, and Lady Gay, Mr. H. C. Lowe's handsome black runner. The officers of the Abilene Coursing Association are Mr. David Hill, President, and Mr. Paul Hurd, Secretary.

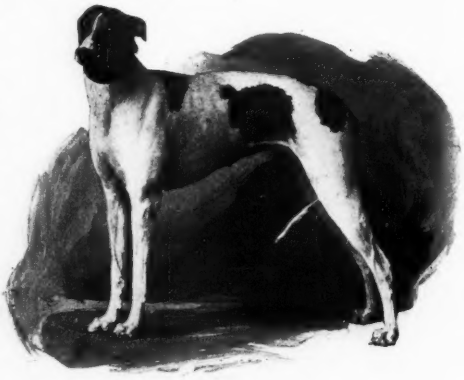
At Clay Center, Kansas, was held the second meet, April 9th to 11th, with many entries and unbounded enthusiasm, but to the disappointment of all concerned, a heavy downpour, lasting for several days, set in, and the meet was declared off, after the first afternoon's running, in which forty-four hounds were entered for the All-age Stake. Here were good dogs and a splendid course, and the Clay Center Club deserves great praise for its strenuous and undiscouraged efforts to promote the sport. Rain prevented nearly all their meets this spring. The members look forward to a grand meet in the autumn, and if perseverance amounts to anything as a virtue, they will surely succeed.

Mankato, Kansas, on April 16, 17, 18, held the third series of the circuit, with Mr. J. A. Lowe, President; Dr. J. R. Perdue, Vice-President; Mr. C. F. Horne, Secretary, and Mr. J. C. Jackson, Treasurer, of the Central Coursing Club. The stormy weather left over from the Clay Center meet interfered somewhat with the earlier races, but the last two days were fair, and the attendance was good. The splendid grounds of the Club probably never before registered such a large entry of high class dogs. The great Hummer, a white bitch owned by Messrs. Dudley, Myers & Stirling, of Clay Center, winner of the

HUMMER.

Open Stake at Mankato in the fall of 1900, was one of the six dogs dividing the purse. An unfortunate lack of rabbits prevented the finish of the finals. Lord York, a giant black and white dog, owned by Messrs. Kenyon & Van Cotte; Reckless Archer, black and white dog owned by Messrs. Dayton, Ragan & Grim; Mountain Lion, fawn and white dog, Mr. Pascal Poe, Pueblo, Colo., owner; Kid McCoy, brindle dog, owned by Mr. E. M. Kellogg, San Francisco, California; Astral Maid, red bitch, Mr. G. L. Crawford, owner —these five noted dogs divided with Hummer the All-age Stake. Don Pedro was one of five dividing the Puppy Stake. Don is a red dog, of superb build, and was whelped January 3, 1900, by Mister Kirk —dam, Lucille. He is owned by Messrs. Dayton, Ragan & Grim, Lincoln, Nebraska,

and was by far the fastest puppy out this spring, throughout the circuit. He was sold to his present owners for the highest price ever paid in the West for an untried puppy by Mr. Charles F. Horne, of Selden, Kansas, who developed him. Mr. Horne is the owner of Fanny O'Rell, winner of Puppy Stake, Lincoln, Nebraska, October, 1900. She divided the Puppy Stake at Clay Center last September, and was runner-up at Seward, Nebraska, the same month, proving herself to be the "fast" puppy of last year. Mr. Horne is a trainer of well-known reputation and his dogs are noted for their speed and great work afield.



FLEETA.

Fleeta and Benshi are two of our celebrated western dogs. Fleeta is a white and red bitch, an old winner, Messrs. Dudley, Myers & Stirling of Clay Center, owners. Benshi, black bitch, owned by Mr. J. C. Jackson, Mankato, won the eighty-six-dog stake at the inaugural meet at Mankato in 1900, and is one of the fastest greyhounds.

This is the scheme of the Mankato Club for enclosed coursing, which is generally imitated throughout the West; the inside field of the half-mile race-track is enclosed with wire netting eight feet high. The lower half is covered with burlap. At one end is the slipping-station and at the other end, some three hundred and fifty yards distant, are the "escapes" leading into the rabbit pens. The jacks are brought through a runway outside the burlap fence, to the slipping-station, and are started out of the runway in front of the waiting dogs. The jacks being driven over the course repeatedly before the meet, know the "home escapes" thoroughly. The judging is a job of no small magnitude. Mr. W. Otis Thompson, a "formerly of Kansas" gentleman, now of Cincinnati, O., has judged the majority of the races in this part of the West, and has given great satisfaction.

Nebraska has her proportionate share of prize-winners. Besides Don Pedro and Reckless Archer, Messrs. Dayton, Ragan & Grim have in their kennels at Lincoln, Lady Kirk and Lord Orford, who divided with the swift Don the Mankato Puppy Stake this spring. They also own such beauties as Pitty Me, Nacaret, and the youngsters Nano-kee and Miss Lucille, winners at Abilene. From Friend, Nebraska, Mr. W. J. Gooden, Messrs. Schrieve & Newer, and Aldrich & Spivey compete in every meet with as swift a kennel as ever left the slips. Messrs. Aldrich & Spivey own the winner of the Mankato 1900 Puppy Stake. This is the young white and fawn Silver Sioux, a most consistent courser, a very symmetrical dog and a dashing worker. Grace Greenwood, another well-known courser, is in their kennels. These Nebraska dogs will give Hummer, Lord York, Benshi, Lady Gilmore, Highland Lad, Fanny O'Rell, The Laird and Fleeta the closest of races. With them may be classed the Colorado champion,

GRACE GREENWOOD.

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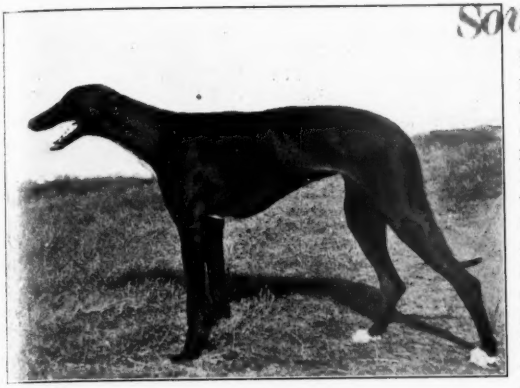


FANNY O'RELL.

The revival of coursing in the West is receiving an agreeable impetus. A deep enthusiasm is manifested in each meet, and the details of every match are carefully looked after. Colorado, Oklahoma, Missouri and Nebraska send representatives with strings of speedy "long-tails" to compete with the Kansas dogs, and even California asserts her interest in the person of Mr. E. M. Kellogg and his kennel of prize-winners. Certainly nowhere can be found such facilities for coursing. The gently rolling stretches of the Kansas-Nebraska area, carpeted with their soft mat of natural grasses, furnish not only the ideal arenas, but also the highly essential jack-rabbit, swift as the wind, who never fails to bring out all the latent speed that lies within the iron muscles of the beautiful greyhounds.

It is a pity that the East does not get more sport out of its greyhounds. They are handsome dogs on the bench but their real beauty is never seen until they are extended in a course.

Mountain Lion, and the Californian, Kid McCoy.

Nebraska partakes of the Kansas topography. Her prairies are wide and rolling, and her streams meander eastward to the Missouri River. Her wild-fowl shooting is much the better, and the prairie chicken is quite abundant. Her larger cities boast of gun and fishing clubs, and coursing is a great feature of her sports. The Kansas-Nebraska Circuit closed with its meet at Friend, Nebraska. The inclement weather of the spring has greatly interfered with the pleasure of the gatherings. The autumn meets will be highly interesting, and will no doubt develop some new winners among those who now stand foremost.

This is a brief account of the western spring meets. The labor of the enthusiasts to arouse interest has been unstinted, and their reward will come when the faultless weather of the autumn months permit such glorious coursing as will then occur. It is due to the unflagging industry of the tireless members of the central Kansas clubs and those of southern Nebraska that so much outside interest is now manifested and it is most encouraging to note that

BENSHI

THE GRAND PARADE OF HORSES ON THE RACE-TRACK AT LONGCHAMP, PARIS.

THE GRAND PRIX DE PARIS

By Guy Wetmore Carryl

EXCEPTING only the English Derby, it is probable that no race is so widely known as the *Grand Prix de Paris*. Some one has said that it is the pivot on which Parisian society revolves, and this definition, which at first might seem to be somewhat extravagant, is in reality not far from accurate. Certain it is that *Grand Prix* day marks the definite end of the Paris season, and that those members of the fashionable world who linger for more than a day or two in town after the great race has been run are wont to offer excuses for their presence, as if it were an infringement of propriety which could not be allowed to pass without a reasonable explanation. The occasion is one of even greater importance than the great national fête of July 14th, for the very character of the latter, as well as its unseasonableness, makes it, like the American Fourth, distinctly a day of the masses; while the *Grand Prix* is an occasion in which both masses and classes play a part, the former turning out in force to see, the latter as conspicuously present to be seen. It is a day when the humblest tradesman ventures upon the unwonted expenditure of ten francs to procure admission to the great race-course for himself and his wife, a day, as well, when the President of the Republic makes a particular point of occupying his private box, and thus setting the seal of official approval upon the favorite pastime of the people he governs; finally a day when visiting English and Americans stifle their natural prejudice against Sunday racing and appear in their most elaborate apparel to stake their bets, side by side with their less conscientious cousins, upon the competing horses.

Nevertheless, it must be acknowledged that the present popularity of the *Grand Prix* is largely a matter of prestige. Whoever knows his Paris will tell you that the Grand Steeplechase of Paris, which is run at Auteuil on the preceding Sunday, is, according to the canons of fashion, the more noteworthy event. It possesses that most desirable and most untranslatable of French qualities, *chic*, to a degree unknown at Longchamp, but, after all, it takes all sorts and conditions of men to make up a race day, as well as a world, and the *Grand Prix* has obtained a hold upon the popular fancy which the far more interesting steeplechase can never weaken. The *Grand Prix* is usually run on the second Sunday in June, on the vast course of Longchamp in the Bois de Boulogne, and is, as a rule, the fourth in a series of six races of varying and, too often, inferior merit. It is almost unnecessary to state that Longchamp, like all French race-tracks, is divided into two great parts, the *pelouse*, or immense oval space inside the course, to which a general admission of five francs is charged, and the *pesage*, almost the equivalent of the English paddock, to which the admission is twenty francs for men and ten for women. While it is naturally to the former that the vast majority of spectators find their way, it is from the *pesage* and in the *pesage* alone that the *Grand Prix* and its most interesting accompaniments can fairly be seen. For not only is it practically impossible to catch even a glimpse of the horses from the flat and densely-crowded enclosures of the *pelouse*, but what is a far more absorbing spectacle, the great world of wealth and fashion is on the other side of the course, to say nothing of the fact that it is in the *pesage* that the President's box and the grand stands or tribunes are situated, that the horses are to be seen, that the jockeys are weighed and mounted.

For an hour before the commencement of the races on *Grand Prix* day, all the approaches to Longchamp are filled with a swiftly-moving throng of vehicles of every imaginable description, from huge twenty horse-power automobiles down through all the varying types of motor carriages, private coaches, drags, carts and victorias, to the humble public cab or lumbering *charabanc*, or open omnibus, holding from twenty to fifty persons, and drawn by three, six, or eight horses, as the case may be. It is a veritable river of conveyances, rising in the city's heart and flowing with ever-increasing volume along the Avenues des Champs Elysées and du Bois de Boulogne, fed by innumerable side-street tributaries, until it

breaks into a sort of delta at the gates of the Bois and swirls on to Longchamp by a score of different approaches.

Before the main entrance to the course an immense space is cleared and patrolled by police and cavalry, and into this the carriages drive by fifteens and twenties, discharge their passengers, and, after being assigned to their respective stations, are hurried out of the way of newcomers. The system moves like clockwork, so that in the space of an hour a couple of thousand carriages can arrive, be emptied, and reach their proper stations without a hitch.

Near the main entrance of the race-track the scene literally beggars description. In practically every instance the carriage, whether public or private, waits to take back those whom it has brought, and the number of vehicles thus retained mounts speedily into four figures. An admirable police system regulates their division into four or five classes by means of colored cards issued to the drivers, each class being stationed on a different driveway or series of driveways: automobiles in one place, private equipages in another, public cabs in a third, etc., so that after the races are over it becomes a comparatively simple matter to find one's carriage at once, an important factor in the preservation of general order, and a tremendous contribution to individual comfort.

But it is not only the racegoers, vast as is their number, who go to make up the *Grand Prix* day, for all the world of Paris that does not go to the track is out to see all the world that does. From the Place de la Concorde to the Porte Dauphine thousands upon thousands are seated in the little public chairs which are a feature of the great avenues, and in the Bois yet other thousands are massed under the trees to watch the throng of vehicles go by and comment on those who fill them. An ever-mindful government, in the persons of the all-pervading police, watches over this multitude with an observant eye, and nowhere in the world is so great a crowd so strictly yet so unobtrusively controlled.

Within the gates the throngs grow to tremendous proportions as the hour approaches for the first race to be run. The tribunes extend for some hundred and odd yards parallel to the course, and behind them are the betting booths, the refreshment buffets, the stables and weighing room, the rings of turf for displaying the horses, and, finally, several acres of ground laid out like a miniature park with shade trees, smooth lawns, flower beds, and gravel walks, where the curiously assorted worlds of sport and fashion walk to and fro in the intervals between races or sit on little wooden chairs under the trees. In front of the tribunes an incline of closely-cropped grass slopes away to the rail and beyond this is the turf track, and, still further, the immense inclosure of the *pelouse*, black with its slowly moving thousands and humming like a giant hive. Here and there among the trees one catches a glimpse of a little group of infantry or dragoons, splashed vividly against the green background like a sketch by Edouard Detaille; or again it will be a sleek-coated racer or a jockey in his gay cap and blouse, as a reminder of this great gathering's *raison d'etre*. Between the tribunes and directly opposite to the winning post stands the President's box, a square structure richly upholstered in dark red, and behind this, as the hour for the races draws near, half the public men of Paris may be seen walking to and fro upon the gravel between the lines of police and infantry, awaiting the President's arrival. Now and again the carriage of a minister, deputy, or diplomat drives through the gates which the general public must pass on foot, and sweeps up to the back of the tribunes with an imposing flourish. For, albeit France is a republic, the love of pomp and privilege is deep-rooted in the hearts of her people, and even when most loudly proclaiming the doctrines of liberty, equality and fraternity, they are not ill-pleased that the rule of the favored few continues to obtain.

Then from the distance comes the sound of bugles, and the crowd presses closer around the entrance to the President's box in eager expectancy. The gates are flung wide open and a moment later the four horses which draw the President's carriage swing through them at a smart trot, guided by postillions. In front ride four dragoons with drawn revolvers and a piqueur or outrider in gorgeous livery, while beside and behind the carriage are more dragoons, and police running on foot. The central figure of all, a short, gray-bearded man with sad gray eyes, is loudly acclaimed as he passes, for, despite his unpopularity, he is more to the people than Emile Loubet. He is the head of the nation, the personification of all the pomp and power of France. And so, as he alights from his carriage there is a deal of cheering and raising of hats, through which he passes to his box

with the singular simplicity of mien which no demonstration, whether hostile or friendly, appears to disturb. Then, as he steps into view of the vast throng waiting in front, the cheering swells into a tremendous volume of sound: "*Vive Loubet! Vive l'armee! Vive la republique!*" which runs out over the *pelouse* and is taken up by all the waiting thousands, to melt a moment after into the strains of the "Marseillaise." It is a republican welcome, but a royal one as well.

We have said that the popularity of the *Grand Prix* is largely a matter of prestige. As a race, and aside from the large amount of the stake involved (200,000 francs), it is not, it must be confessed, of any particular interest or merit. The distance is but 3,000 meters (3,281 yards) over a flat course, and while a dozen or more horses are always engaged, better events, from the sportsman's point of view, are to be seen any other race day at Longchamp. Again, it must be reluctantly acknowledged that racing in France is not wholly free from a suspicion of tricky dealing, and such enormous sums are annually squandered on the French tracks by the general public that now and again—and at long intervals—races are run which are quite frankly foregone conclusions, serving as a sort of bait to maintain the public's hopefulness as regards betting. Justly or not, as the case may be, the *Grand Prix de Paris* has come to be counted among these "favorites' races," and this, while undoubtedly contributing to its popularity with the masses, cannot be considered a recommendation on the ground of sport.

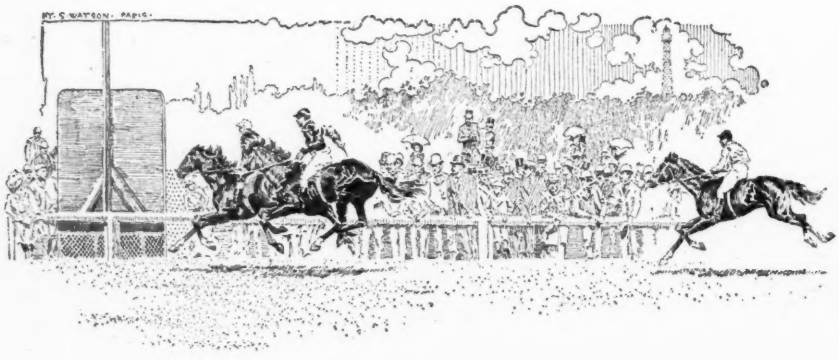
Before going further, a word of explanation is necessary for those who know nothing of the elaborate French system of betting familiar to all racegoers in France under the name of the Paris Mutuel. On the programmes of the races each horse entered for an event is assigned a number, and half an hour before the race is run the numbers of the horses actually competing are posted on huge bulletin boards back of the tribunes, opposite each number being the name of the jockey. The betting booths are ranged in long rows, one or two for five hundred franc, half a dozen for one hundred, twelve or more for twenty franc, and twenty or thereabouts for the commoner ten franc bet. Each booth is divided in halves, one side being reserved for the sale of to win, the other for that of place, tickets. In each division are posted blocks of colored tickets, one for each number, and from these blocks the tickets, numbered in sequences, are torn off as called for, thus enabling the bettors to see at any moment and at a glance exactly what amount has been staked on each horse. The entire amount staked upon the horses to win is equally divided after the race between the backers of the actual winner, after a deduction has been made of seven per cent., of which one per cent. goes to the breeder of the winner, two per cent. is devoted to national charities, and four per cent. is applied to track expenses. The amount bet upon each horse actually securing a place is first deducted from the total bet on places and the remainder equally divided between the bettors on the placed horses—two places being paid when there are four horses, and three when there are eight in the race—and the sum staked on each placed horse is then equally divided between the holders of tickets on that particular horse. As soon as possible after the race is over the results of this partitioning are posted on the bulletin boards and the holders of winning tickets have only to present them at the payment stall corresponding in number to the betting booth, to receive their money. It can be seen that the result of this system is an infinite variety in the amount of the payments. In the case of a heavily backed favorite the amount of each bettor's winning will be a relatively small, while the few backers of a successful outsider divide the large sums staked upon the more popular horse. Frequently a strong favorite will win for his supporters but a franc or two over the ten franc stake while there have been cases of unknown winners returning a thousand or fifteen hundred francs for the same amount.

Practically every one bets on the *Grand Prix*, and the scene back of the tribunes as the hour for the start comes on is one of the utmost animation. The men are all in conventional afternoon dress, lightened in many instances by white gaiters and waistcoats, the women in their most elaborate gowns, for the promenade ground at Longchamp is not only where half the summer fashions are born, but at the same time a battlefield on which all the great Parisian dressmakers engage in combat. The throng is an extraordinary mixture of light and shade, of gay colors, brilliant fabrics, and sparkling jewels. Above, the great bulletins flash out the names of jockeys and the numbers of horses:

below, a myriad fingers are busily noting the information upon fluttering programmes. Beyond are the little booths, each besieged by its throng of eager bettors, and, still further on, stable boys are leading the horses round and round upon the smooth sward, and jockeys, trainers, and owners are seen engaged in earnest speculation upon the probable winner of the great prize. Then comes the saddling bell and as the jockeys run to their mounts, the crowd of spectators breaks away in twenty directions and pours out between the tribunes to find places overlooking the course.

At this moment Paris is more than ever Paris, more than ever the incarnation of all that is brilliant and careless and gay. The tribunes are black with solid masses of people, or dappled with an infinite variety of colors like pieces of living tapestry, and every little wooden chair on the grass in front is occupied. A quadruple line presses against the rail, and beyond are the shifting multitudes in the *pelouse*, and then a great sweep of turf, spreading away to the further side of the course, where yet other thousands are peering through railings and down from trees upon the scene. Now there are flashes of brilliant color upon the track, and one by one the horses sweep by the tribunes on their way to the start, the jockeys standing stiffly in their stirrups, their gay silk blouses fluttering in the wind as they bend low over the necks of their mounts. A pause; and then from somewhere a bell begins to ring, and from a thousand lips comes that drollest of French expressions, "*Ca y est!*" which may be made to signify almost anything, but in this instance means as nearly as may be, "They're off!" Far off, on the outer side of the course a tiny group of horses is seen scurrying away to the right. It vanishes for an instant beyond the bend, then reappears, slanting around the curve on to the long home stretch, while a dozen voices near one proclaim as many winners, in true Gallic fashion. There is a growing roar from the throng, a thud-thudding of swiftly flying hoofs, and then the horses sweep past the tribunes again, and the *Grand Prix de Paris* has been won.

The return from the races is the approach all over again, but doubly magnified. All the carriages are together now, moving slowly up the Allée de Longchamp in a compact mass that fills the driveway from curb to curb. The throngs on the sidewalks are denser, the police more numerous; until at last the pace increases, and the great river of conveyances sets back along the Avenue du Bois and down the Champs Elysées, breaking off every few hundred feet into the tributary streets that originally fed it. Two hundred thousand francs have been won and lost, two hundred thousand Parisians have had their outing, and the spring season is a thing of the past.



SIR THOMAS LIPTON AT HOME

By Dugald Stewart

SIR THOMAS LIPTON'S courage and public spirit in coming forward a second time to try and wrest the *America* Cup from its natural abiding place are worthy of the highest praise. He is not a pot-hunter; he cares nothing for the pleasure of ransacking the shores of his own country during the summer months for the innumerable yacht-racing trophies to be gained there; he sails the *Shamrock* and her successor, *Shamrock II.*, for the sheer honor and glory of trying to prove that a British-built and sailed yacht is capable of holding its own with an American boat. A business man, whose enormous commercial interests naturally demand the closest economy of time, he is yet willing to sacrifice, for the pure love of sport and international good-fellowship, many weeks of valuable holiday. The expenses are naturally extremely heavy, but as Sir Thomas is a man of vast wealth the cost is comparatively a minor matter. To him "the play's the thing." A real sportsman at heart, sailing his yachts from love of a well-fought, sea-going contest, the mere detail of finance is not for once suffered to obtrude itself. The fairness and unselfishness of Sir Thomas Lipton and his methods captured the American public in 1899. His send-off, on his return to England, was a real ovation, and it cannot be doubted that his reception this year in New York, when he comes to carry away, if it be humanly possible, the *America's* Cup, will be at least as hearty as in 1899.

Sir Thomas Johnstone Lipton, to give him his full name, is one of the best specimens of the self-made man. Born six and forty years ago in Glasgow, of North of Ireland parentage, he has steadily climbed the ladder of fortune from its lowest rung, and, by his own exertions, integrity, and business capacity has, at a comparatively early age, attained the position of one of the richest men in Great Britain. A true Clydeside man, he had, even from earliest boyhood, a great leaning to-

OSIDGE, SOUTHGATE, SIR THOMAS LIPTON'S COUNTRY HOUSE.

wards yachts and yachting. As a youngster he sailed about the beautiful West of Scotland firth in small boats and yachts of every conceivable size and class, and he describes his happiest holidays as having been spent at one or other of the watering-places of the Clyde estuary. He is a practical yachtsman, having served a long apprenticeship in all sorts of craft, beginning with a lug-sail boat which he managed for himself. With such up-bringing, it is small wonder that he is in his mature age a devoted lover of yacht sailing. It is a fact that so long as fifteen years ago his thoughts first ran upon the *America's* Cup and the possibilities of its being captured and brought to Britain. If in this forthcoming autumn he should be so fortunate as to carry off the trophy, one of the great ambitions of his life will have been achieved.

shop in Glasgow. Since that day he has never looked back. "Lipton's Limited" now possesses some four hundred and fifty stores in the United Kingdom, besides tea, coffee, cocoa, and other estates in Ceylon, India and elsewhere, as well as fruit farms, curing factories, huge bakeries and other establishments, and has developed into a gigantic business, which grows and thrives with the passage of each year. On the plantations in India and Ceylon alone there are more than 10,000 employees on the pay rolls. In addition to controlling these vast industries, Sir Thomas Lipton has in his own hands a great packing business in Chicago, where in a single day more than 3,000 hogs are killed. To deliver his fresh meat in good condition, not less than 600 of his own refrigerator cars are employed. Sir Thomas Lipton's recipe for

Photo by N. L. Stebbins.

THE *ERIN*.

In his younger days Sir Thomas saw a good deal of the States, and in South Carolina, New York, and elsewhere toiled hard for but scant remuneration. He first visited America as a lad of fifteen, in or about the year 1871. He emerged successfully from the roughs and tumbles of those youthful days, and managed to return to Great Britain from New York with the modest savings of five hundred dollars. "My experience in America sharpened me," he says, "and I always feel that I got a good commercial training there." It was after his return that he started his real business operations, five and twenty years ago, with a single provision

success seems simple enough. "Work hard," he says, "deal honestly, use careful judgment, do unto others as you would be done by, advertise freely and judiciously, and success is bound to follow." It is worthy of remark that although an enormous employer of labor he has never had a strike, nor in his own opinion, is he ever likely to have one. "I make it my business," he says, "to look after the interests of my men and we live in peace and harmony." His public benefactions have been enormous. He wrote a check for $125,000 toward the Princess of Wales' Dinner Fund for the Poor in Diamond Jubilee Year. He started the Alexandra Trust, for

supplying working people with cheap dinners, with the magnificent sum of $500,000, and he is greatly generous in other and less known ways. He was knighted in 1898. He is a great traveler, having business houses and stores in New York, Chicago, Berlin and Hamburg, and he occasionally looks in upon his estates in Ceylon and India. Twice he has made the circuit of the world. In his fine steam yacht *Erin* he often visits the Mediterranean.

Sir Thomas, who is unmarried, lives at "Osidge," a pleasant, rambling, old-fashioned house, standing in a well-wooded park, near Southgate, Middlesex. Osidge anciently formed part of the estates of the Abbots of St. Albans, which old-fashioned town, with its venerable cathedral, lies only a few miles distant. The house is comparatively modern, boasting an antiquity of only about a hundred years. The gardens and grounds are delightful, and in the park Sir Thomas has a well laid out golf course, over which he amuses himself with his friends occasionally. There is nothing pretentious about the house, which is designed for comfort and convenience, and not as a show place for the eyes of strangers. Some excellent pictures by

SIR THOMAS LIPTON.

CUP PRESENTED TO SIR THOMAS LIPTON BY AMERICANS.

Lely, Canaletti, Constable, Landseer, Marcus Stone, Charles Leslie, MacNeil, and Sidney Cooper, and innumerable curios, gathered from all parts of the world, are to be found in the interior. Sir Thomas Lipton shares with Mr. Chamberlain a taste for orchids, and in his houses are to be found many splendid examples of these exotics, among which a new and beautiful species "Liptonia" is noticeable. An orangery and a collection of tea plants are items of interest sure to arrest the attention of the visitor. Smooth lawns, gay beds of flowers, fine old cedars, pollard oaks, and magnificent rhododendrons add not a little to the charm of the grounds. From the windows of this typical English home a fine prospect meets the eye. In the foreground lies pleasant undulating country; while far away stretches the gigantic wen of London, with its pall of smoke. On a clear day the gilded cross of St. Paul's Cathedral can be descried shimmering in the sunlight.

As a consequence of his long familiarity with the United States, Sir Thomas Lipton is much interested in American horses. He has some famous Kentucky trotters, and, shunning railways, drives a pair of these animals daily to his offices in the City Road, London, some eight miles distant. He is fond of riding, takes an interest in dogs, plays golf occasionally, and enjoys a game of billiards. And he is an admirer of pictures, gardens, and country life. Sir Thomas has no great time for reading, and newspapers and periodicals form his chief literary pabulum. Half an hour's conversation will, however, be sufficient to convince anyone that few people have a wider grasp of affairs, or are better versed in all current topics of the day.

Sir Thomas Lipton stands well over six feet in height, and, as befits a worker of gigantic powers and concentration, is of stalwart frame and excellent constitution. Of a hearty, sanguine disposition his merry blue eyes bespeak a man of cheerful habits and abounding good nature. His kindly, unobtrusive, yet open-handed hospitality will be familiar to many visitors to the *Erin* during her stay in American waters.

THE MAINE GUIDE AND THE MAINE CAMP

By Herbert L. Jillson

THE Maine guide, in the mind of every sportsman who has "done" Maine properly, is closely associated with memories of pleasant and successful days with the rod on lake and stream, or long tramps through the woods with the rifle. It is his guide, not the sporting camp proprietor or the people he meets, that the sportsman, after return to civilization, remembers most of all. This recollection is almost always tinged with tenderness, for "Charlie" is to the minds of a certain number of sportsmen, not only the best guide in the State, but the staunchest friend in the world; while, on the other hand, Charlie thinks no sportsmen come to Maine except Mr. So-and-So and a few others of his select coterie. All others lack much or little of being up to Charlie's ideal, and he loves to relate, with glowing eyes, in the presence of other guides, the achievements with rod and gun of the mighty Nimrods whom he guides. To the sportsman, on the other hand, all other guides than their own particular are just a bit "off." They talk too much or too little, paddle or walk too slow or too fast, or, possibly, the cooking is uncertain; but their Charlie hasn't a fault. It is a pleasure to converse with him or be in his company, his paddling and gait are just right, and the coffee never fails to be good, the trout cooked to a turn, the bread light, or the flapjacks brown and tender.

Some sportsmen are, indeed, wont to carry their enthusiasm so far as to quarrel about their guides much as children do about their papas, and while Mr. Gun admires Mr. Rod, personally, he cannot for the life of him understand how he can go into the woods with "that blockhead Tommy." Both seem to forget that a guide is much like a wife; what suits one man has no attractions for another. It is the old, old story where people fail to comprehend what there is in the mysterious word—companionship.

The typical Maine guide is just as much a product of the soil as are the mighty forests, and his replica is not to be found elsewhere. They are, of course, all human and differ in temperament. One may be nervous and excitable, another reserved and deliberate; a third, patient and forbearing, and a fourth, quick tempered and unreasonable; but, as a class, good guides are to a man, strong, willing, friendly and ever on the lookout to see that their "sporter" has the best there is to be got. They are good friends and, sometimes, bitter enemies, for their sense of justice is keen and they are ready to retaliate for a just and, sometimes, a fancied grievance. The majority are sober and honest, if one accepts the latter qualification by making allowances for the fairy tales which they are wont to spin for the entertainment of their city guests, and, often, they have told these over and over until they really believe them. Profanity is not a rule among them, although a moderate amount adds zest to their conversation on fitting occasions. With scarcely an exception they know their place and keep it, seldom mistaking kindness for familiarity or imagining that they are the sportsman and the sportsman the guide. They do not expect to be put on a basis of familiarity. They realize that the men they guide come from a world of which they know little, yet they are seldom envious. They only ask to be treated like men, nothing more.

Guiding is a business with them, devoid of all the frills the uninitiated enthusiast might attach, and taken season in and season out, it is about as hard work as one would wish to undertake. To tramp long miles carrying a heavy pack or an eighty-pound canoe over a rough trail, to paddle from morning until night, to be ever at the call of some one who is in the woods for enjoyment, and then to end the day by getting supper, chopping wood for the night, building a lean-to and boughing down the beds is no easy or unimportant task. If ever a class of men earned their money fairly and squarely it is the guides who are working for $2.50 and $3 a day. A good guide gives his employer the benefit of knowledge gained from years of experience in the woods—the art of woodcraft, the habits of fish and game. He does not hesitate, if need be, to risk his life for his employer, and the greatest personal discomfort is a pleasure to him if it only adds to the

enjoyment of his party. Who else would sit in a canoe and paddle for hours in a hard rain drenched to the skin? Who else would pack a canoe half a dozen miles without grumbling, simply for the sake of a few hours' fishing? Who else would give up a blanket and sit by the fire that you might be warm, or go without food that you might not go hungry? No one but the guide is the answer of all who have been fortunate enough to be under the care of a good one while in the woods.

The guide does his best work for the man he likes. It adds pleasure to his occupation to have a man who is appreciative, kindly, and patient. The guide likes to be told that the cooking is good, that the day's sport has been satisfactory, and he appreciates any demonstration of personal interest. Above all things he hates a "kicker," and such a man has a hard time in the woods as soon as his failing becomes known. He admires a man who is a good shot or expert with the rod, and will do anything to assist such a one to obtain what he desires, for he feels, and justly, that half the glory of his employer's achievements falls upon him. After taking a man up close to a mammoth moose or big deer and seeing a whole magazine of cartridges fired without effect, or after paddling cautiously up to a fine trout pool and having the water pounded until the fish flee in terror, he gets discouraged, and it is not to be wondered at. He has done his best in every way, and to have grumbling is not pleasant. The guide admires the straightforward man. He can tolerate anything if he believes one is sincere in it. If a man can neither shoot nor fish he likes to know it, if things are wrong he would feel better to receive a friendly suggestion than to be told something he knew was not true.

First of all the sportsman who wants to enjoy Maine and see the State properly should secure a good guide, for the best fishing is not found on the brooks and lakes close to sporting camps, and the finest hunting is miles distant, even at the wildest and most remote of them. This can be best done by securing information from some old time Maine sportsman who knows such men. A registered guide is not necessarily all right, for there is little opportunity for the fish and game commissioners to investigate and mediocre men get certificates. After securing his guide, the sportsman must treat that guide "white," and there will be no trouble. The guide does not expect you to help paddle the canoe unless you so desire, for the "help" would probably flavor more of hindrance. If you care to "sack" part of the pack over the trail he will be grateful, but he does not expect it. He wants you to get all the pleasure you can and first, last, and always to be reasonable, not to expect more of him than flesh is capable of, to appreciate the good things he brings your way and to make the most of unavoidable discomforts. If you have money and choose to give him $5 or $25 at the end of your stay, as a tip, or a nest egg for the "little 'un," it will further cement his regard for you, for money is scarce in Maine, and people live plainly. If you cannot afford to do this, friendly acts and kindly interest will do just as well. Do whatever the heart prompts and the purse permits, and your guide will ever be your stanchest friend and most ardent admirer. Above all, make no promises of gifts when you "get home," if you are not in earnest. Always keep faith with your guide if you seek his faithful service and respect.

Photo by E. R. Starbird.

A CABIN INTERIOR.

ATTEAN LAKE—A VIEW FROM THE CABIN PORCH.

THE CAMP

THE Maine sporting camp, as it is in reality, is little understood by those who have not visited it. At the sportsmen's exhibitions, to be sure, one may have seen sample camps, but an impression formed from these imitations would be far from correct; they give a very inadequate idea. Within the past few years, comparatively speaking, sporting camps have been springing up at favorable locations all over northern Maine. The proprietors are generally guides who have seen a possibility to make money through the venture. Each camp has its "preserve," so called. The greater part of the wild lands of northern Maine are owned by men or companies of men, who, on account of their vast lumbering wealth, often will not sell at any price, and the figures set when the lands are on the market, are beyond the reach of any save millionaires. The land owners are willing, however, to lease "sporting privileges," so called, for a term of years at prices varying from $25 to $100 per year. This gives the lessee right to build cabins on the land and to go over it, camping at will, cutting such wood as is necessary for cabins, wharves, rafts, fuel and the like. Others cannot camp upon the land without the consent of the lessee, but the State makes all lands and all water public so far as crossing them is concerned, and one may fish or hunt them at will, so long as he does not build fires or camp upon them. Each sporting camp has from one to five townships, each six miles square, in its preserve. This gives a large territory, numerous ponds and streams for fishing, waters where deer congregate in the summer and forests where big game roams in the autumn. The camp manager opens up this land. There is a "home camp" at a central point and as convenient to the main road as possible, and trails are cut to the best fishing and hunting grounds, where cabins and lean-tos are erected according to the nature of the territory. At the most important of these branch ponds canoes are placed in order to avoid the necessity of carrying them through the woods when

guests desire to visit the places. If there is a mountain near at hand, or a place of especial interest, a trail is cut to that and a feature made of it as a tramp.

The ideal location for a sporting camp is at a point where a large mileage through rivers and lakes opens up for canoeing and at the same time a vast country for tramping from the nearby shores. If one can be fortunate in having a railroad close by another card is played, but these ideal locations are few, and the majority of the camps are not so favorably situated. The extent of territory enables the proprietor to handle a large number of people of varying tastes—those who desire the comforts of the home camp continually, others that want a little rougher fare, and the sportsman who desires nothing better than the lean-to or deserted lumber camp. The typical home camps are models in their way and every art and craft known to the backwoods, and much of civilization is used to make them attractive and comfortable. They are located on some river or pond, backed by the forest, and at a central point with a good view of water, forest and mountains. The number of cabins varies from six to twenty, and they are usually of two sorts, single and double. The single camps are about 16 feet by 22 in size and some 6 feet high to the eaves. The roof is of "splits," shingles made by splitting cedar or pine with a "frow," and the floor is of boards if there is a sawmill near, and if not, of hewn logs. There are single sash windows on either side and the rough logs, chinked with moss, are often concealed from view on the interior, by a lining of splits or birch bark.

The furnishings consist of two wide beds located on either side at the extreme end of the cabin, a table, and comfortable easy chairs, of the folding pattern. Located in a corner at the front of the cabin is either a rustic fireplace made of stones, or a little wood stove. The former method of heating is the most popular, for there are few nights and mornings in Maine, spring, summer or autumn, when a fire is not comfortable and a cheery blaze is always very delightful to chat by, or to watch flicker on the ceiling after one has retired. These furnishings, home made and rustic, together with the cabin lining and the dim light let in by the small, low windows, make the interior of these cabins very unique and artistic. Bright colored curtains at the windows and draperies upon the shelves, together with guns and rods

CAMP AT LONG POND.

hung upon deers' feet and wooden pegs, further delight the artistic senses. There are numerous shelves to hold the many things the visitor needs, hooks for clothes made by nailing up forked sticks cut to the proper length, or driving in rough wooden pegs, and here and there little oddities; a match box of birch bark, an etching on a bit of fungus, and the like. A broad porch springs from the front of the cabin where one may sit or swing in a hammock. It will be seen that a man and his wife or a couple of sportsmen may be very comfortable in this little home, for a long or short stay, making headquarters for such trips as they desire to make from time to time.

The double cabins are much the same, only larger. There is a main living room in the center with the fireplace at the end, and four rooms, each with a bed, on the sides. The porch is larger and the roof higher, thereby letting in more light. These cabins hold four, supposedly, but they may hold eight comfortably, and the single cabins are adapted to four persons who are well acquainted. The dining-room is a large separate cabin joined on to a kitchen which rests at the rear. The rough tables are concealed with clean linen, and plain crockery and knives answer as well as silver and china. The interior of this cabin is lined and there are numerous trophies—mounted heads and fish, outlines of big trout, bits of moss, birds' nests, birds' wings, and the like upon the walls for decoration.

There is usually a separate cabin, or casino, for general assembly, social evenings, entertainments and the like. Here are card tables and chairs invariably, and oftentimes magazines, papers and sometimes a piano. A rustic fireplace is a central feature.

The food is good. In the summer there are toothsome fried trout three times a day if one wishes, and in the autumn plenty of venison. A cow furnishes milk, while a little garden supplies few or many vegetables according to its location. There are delicious berries during the summer. Sparkling spring water is always found.

It will be readily seen that the home camp is entirely "suitable for ladies," and it seems very queer to camp managers that this question is asked again and again each year, in letters.

The branch or back camps are not so luxuriously fitted out, but even ladies who are fond of roughing it often find their way to them and come back delighted. These camps have supplies, but a guide is necessary to visit them enjoyably. This personage does the cooking, paddles the canoe, shows where the fish and game are, and makes himself valuable as only a guide can. A cook stove helps the cuisine and one forgets that the table dishes are of tin, the dining table covered with oil cloth, the beds of boughs, and that blankets take the pace of sheets.

Farther "in" is the lean-to or tent and the meals are cooked by the camp fire, a portable baker being used to bake bread. The farther in one goes the rougher becomes the task and the less the larder affords, but the country is wilder and fish and game abound in astonishing numbers. Here is where the sportsman goes and stays after once tasting the wild life.

It is not strange that year after year Maine is becoming more and more a resort for people who seek rest and recreation as well as sport with fish and game. Rangeley and Moosehead have their hotels, golf links, tennis courts and every luxury to be found at any popular seashore or mountain resort, but the sporting camps seek to cater only to those who love the woods and their solitude, and the magnificent sport which is found all about, together with necessary comforts. For a place to rest and escape the noise of the city or the confusion of the overpopulated summer resort, the camps have no equal.

As long as satisfactory legislation holds in force there can be no doubt about the great future of northern Maine as a resort for all classes of people. The sporting season is from the middle of May until the last of June and from September 1st until December. During July and August the sporting camp is only such in name, and the proprietor strives to fill his cabins with family parties. Each year the numbers who come for weeks and months during this period are increasing. Maine sporting camps as "summer resorts" are as yet little known, but "loving friends" are good advertisers.

THE DOVE'S NEST.*

THE DUSKY FLYCATCHER'S.*

*These four photographs by Gene Stratton-Porter were intended to

THE ROBIN'S.*

THE BELLBIRD'S.*

be used in her article in OUTING for July but were not completed in time.

THE EFFECT OF THE AMERICA'S CUP ON BRITISH YACHTING

By J. D. Bell

THE victory of the American schooner yacht *America* over the British schooners and cutters that were entered against her in the summer of 1851 to race in a match round the Isle of Wight, was really the advent of the modern British racing yacht. Previous to the arrival of the American yacht there were races between English, Irish and Scotch cutters and schooners, but these yachts were mainly built for cruisers, and in build were not far in advance of trading vessels. One notable exception was the line of Leith and London smacks or sloops which occasionally reached the unwieldy size of three hundred tons. To get spars of sufficient size the masts were built from segments of trees and the booms were also so built in some cases. These vessels were mainly built to carry passengers between Scotland and England in opposition to the stage coaches, and since speed was essential these huge cutters seldom lost time entering a port for refuge from stormy weather. Occasionally record passages were made by the rival vessels of the two companies. No time was lost in reefing these cutters when it came on to blow. The heavy mainsail booms were fitted with foot ropes like square yards and the crews scrambled out to "roust" in the reef points as best they could. The revenue or custom house cutters were built to catch smugglers on the British coast and as in the Leith and London sloops speed was an essential quality.

The sailing feats of these cutters were about the only stimulus our shipbuilders had to improve the build of their vessels down to the beginning of the last century. Yacht building was but a branch of ship building at that date—and continued to be so well into the century. Yachts were built and rigged as brigs and were raced in ocean matches against schooners and cutters. No time allowance was given and large yachts and small ones were raced on level terms. The designing of yachts was altogether left to the builder. Racing captains were often seafaring men unaccustomed to fore and aft canvas, and crews knew so little about trimming sails that the *Volante* cutter, about forty tons, the most dangerous opponent that raced round the Isle of Wight against the *America* schooner, carried a big balloon jib to work to windward with. When this cutter opened out the Isle of Wight the balloon jib buried her in broken water and was hauled down.

Before the arrival of the *America* schooner in the English Channel no attempt had been made to divide British yachts into classes. Each yacht club made its own arrangements and these were as various as the clubs themselves. Builder's measurement was one of the methods of computing the tonnage. In yacht club cruises it was sometimes arranged that the yachts should sail in port and starboard squadrons, the aim being to introduce regulations adopted in the navy. This primitive chaos had not altogether cleared off when the American schooner yacht *America* arrived at Cowes from New York, and provoked a great deal of criticism at her appearance. She was so unlike what English yachtsmen regarded as an ideal schooner yacht that the stranger met with faint appreciation. The American visitor did not fulfill the conditions of the old saying among English sailors, that a good vessel "ought to be ship shape and have every thing about her Bristol fashion." Certainly the American schooner was a considerable variation on the vessels which filled up the motley squadron of yachts that were beaten by her in the contest for the *America's* Cup.

That the success of the *America* was altogether unaccountable to English Channel yachtsmen was proven by the very diverse explanations given as the reason for her victory. Among the peculiarities that had been of advantage to her, it was said, was being rigged without a foretopmast. In consequence English schooner yachts sent their foretopmasts ashore and schooners being built were rigged without them. The *America* was raced with the

sole of her mainsail laced to the boom and had her heavy foresail laced to a jackyard. This was a recognized advantage and both old and new canvas was torn out of shape to imitate the *America's* canvas. The *America*, in the race for the cup, carried away an English-made jibboom, adopted by the advice of English yachtsmen, and it was observed luffed out to windward better without it. Instead of jibbooms English schooner yachts began to adopt running or cutter bowsprits.

The salient point of the hull of the *America* which attracted the attention of British yacht builders and British yachtsmen was the length and sharpness of her bow in comparison to the bows of British yachts and her victory was mainly attributed to her long bow; consequently there was a complete alteration in the build of British yachts. Those being built had longer and sharper bows designed for them while many old yachts were opened out forward and had longer and sharper bows built on to them. This adoption of the *America's* bow was at once discovered to be a great improvement. The older yachts thus treated were so much improved that they were able to beat yachts which had regularly beaten them. But the improvements introduced by the *America* were overdone. The imitation as usual was carried the length of being an exaggeration and wonderful abortions were built which haunted British regattas for years afterwards. The old-fashioned rule of British shipbuilding prescribed "the cod head and mackerel tail" as the correct formula—but it was abandoned for the more recent belief that the rule ought to read the reverse way. Long and sharp bows with comparatively heavy quarters became the fashion—especially among English Channel yacht builders. The explanation offered was that powerful quarters were wanted to carry the mainsail and the mainsail boom in breezy weather. One consequence was the building of schooners and cutters that were exceptionally fast in reaching but did not show in turning to windward. Since the schooner *America* beat some of our fastest cutters going to windward her build must have been misunderstood.

Wanhill of Poole, one of the best English Channel builders, built many fast yachts which were notable for their speed in reaching and running, the most famous of these being the *Egeria* owned by Mr. Mulholland, which carried off among other prizes several Queen's Cups. What resemblance *Egeria* may have had to the *America* has never been discussed, but like the fastest British yachts she must have shown some modifications of the American build. Dan Hatcher of Southampton built many fast forty-ton cutters, the fastest of these being the *Norman*. This cutter was a long stride in what has proved to be the right direction. In designing her Hatcher must have had in his mind the American centerboard cutter *Truant*, the success of which in this country occasioned the exclusion of centerboard yachts from our regatta programmes. The *Norman* had a long and shallow hull with a keel so thin that it looked little more than dead wood. This cutter's keel was in fact a modern fin or fixed centerboard and may have had some lead bolted on its lower edge. Her success was at times phenomenal but Hatcher did not seem to think that her build had much to do with it for he went back to his earlier designs and the yachts he built afterwards were not so successful as *Norman* had been. Of course the edict against centerboard yachts arrested experimental improvements, and followed up as it has been by the restrictive legislation of our Yacht Racing Association, progress, unless sanctioned by the Association, has been virtually brought to a standstill.

The prejudice against lead ballast, amounting to something like a superstition, was a serious obstacle to progress in the building of British racing yachts, in the Clyde especially. The difficulty of carrying racing canvas without it can be well understood. English yachts were carrying it in moderate quantities and obtaining the benefit, before the Clyde builders and owners got reconciled to it.

Mr. G. L. Watson discovered at an early date that lead and canvas were leading factors towards success and without prejudices himself he put his conviction to the test in his earlier yachts. But it was not till he was commissioned by Mr. Clark, of Paisley, to design the ninety-ton steel cutter *Vanduara*, built at Glasgow in 1880, that Mr. Watson felt assured that the stability that would ensure speed could be obtained by the free use of lead. *Vanduara* was a success and in her design Mr. Watson disclosed an originality that has not forsaken

him. This cutter, unlike the other yachts in her class, showed no hollow lines in her bow, and it was obvious that her fore body was fuller and more powerful than usual in cutters of her size. In fine weather she was fast to windward, but it was in a breeze and head sea she showed to the best advantage. She was regarded as a wonderful cutter in bad weather—and head winds—and her best qualities have marked Mr. Watson's cutters that followed. Mr. Beavor Webb's challenger *Genesta* was fast all round but her best points were running and reaching. On the contrary, these were the weakest points of the *Vanduara*. But Mr. Beavor Webb's *Genesta* started a new era in the building of cup challengers. The previous challengers *Cambria*, *Livonia* and *Lady Dufferin* were, of course, schooners, and the rig was very properly abandoned for the fastest of all rigs, the cutter rig. Sir Richard Sutton's challenger *Genesta*, was followed by Lieutenant Henn's cutter *Galatea*, and after a pause by Sir James Bell's *Thistle*, designed by Mr. G. L. Watson and built at Glasgow by Messrs. Henderson. *Thistle* like her predecessors was a keel cutter and was beaten by the defender *Volunteer*, designed by Mr. Burgess. *Thistle* showed more speed than *Volunteer* running before the wind but the American defender beat this challenger badly turning to windward. *Thistle* was, of course, a keel cutter with a comparatively shallow draught, while the *Volunteer* was fitted with a deep centerboard which provided much more lateral resistance than the draught of the *Thistle*.

Lord Dunraven followed with his cutter *Valkyrie I.* which like the other British cutters that were challengers was a keel cutter, but after trial races with British yachts it was found that she had neither the speed nor the tonnage to fit her for the contest with an American defender of the cup. Lord Dunraven resolved to build a second *Valkyrie* and challenge with her. Meantime Mr. Watson was thinking out how the American centerboard could be circumvented, and designed *Valkyrie II.* in accordance with the decision he had arrived at. If the whole of the lead ballast the second *Valkyrie* required were bolted to a deeper keel than any previous challenger had been designed with, she would have greater stability than any American defender built with a centerboard that could neither be dropped nor raised with sixty or seventy tons of lead attached to it. Herreshoff, undaunted by the difficulty, built the defender *Vigilant* with a centerboard, believing no doubt that the ballast required for stability could be carried on the hull.

Valkyrie II. crossed the Atlantic and encountered the *Vigilant*. In the final race between the challenger and the defender, *Valkyrie II.* in a good breeze reached the turning mark about five minutes ahead of *Vigilant*. In the run home *Vigilant's* centerboard was, of course, raised and perhaps she might have caught *Valkyrie* but the crew of *Valkyrie* made this easier by the bungle they made in setting the cutter's spinnaker. *Vigilant's* visit to Britain and her encounter with Mr. Watson's cutter *Britannia* finally dispelled the American belief in centerboards for racing yachts, and Herreshoff's *Defender* was built without one.

After Mr. Watson disposed of the American centerboard he found himself face to face with another and greater difficulty, which was to design a keel cutter that would be faster than any American keel cutter that could be built. Lord Dunraven's second challenge was given and accepted and Mr. Watson designed *Valkyrie III.* This cutter was designed as an improvement on *Valkyrie II.*, of course, as well as an advance on Watson's cutter *Britannia* which showed superior speed to *Valkyrie II.* before that cutter sailed for New York to engage in the Cup race. *Valkyrie III.* was hurriedly launched to have time for some trial races with *Britannia* in the Clyde before leaving for New York. Through some miscalculation it was found that the new *Valkyrie* was trimmed down by the head and in consequence made a bad show in a Clyde breeze. An attempt was made to remedy this by putting about ten tons of loose lead into the cutter to trim her down by the stern. This haphazard alteration effected a great improvement in speed, and in a fair trial with *Britannia* over a fifty-mile course in the Clyde beat that cutter by a considerable margin. Mr. Harry K. Horn, of *The Field*, the best judge we have ever had of the performances of racing yachts, was watching this trial of speed between *Valkyrie III.* and *Britannia* and was talking with me while the race was being finished. I asked him for the most accurate opinion he could give of the comparative speed of the two cutters. He replied: "My

opinion is that over a fifty-mile course in moderate weather *Valkyrie III.* is twenty minutes faster than *Britannia.*" I never asked Mr. Watson whether or not the *Valkyrie* required any more ballast than what was in her keel, but if not the cutter was handicapped by the weight of the additional ten tons of lead.

In the last match between the *Defender* and *Valkyrie III.* the latter was started with her boom well over her quarter, a mistake the crew of *Defender* quickly detected and made use of.

Shamrock I., the next challenger, started with high expectations of success, which were not realized. Mr. William Fife, Junior, the designer of the cutter, had a great reputation as designer and builder of 65-foot raters, the *Isolde* and the *Senta* being his best. Both of these successful cutters have found American owners. Mr. Fife has had great experience in the designing and building of racing yachts from five-tonners upwards, and has won a fine reputation for speed as well as workmanship. His 52-foot cutters, the successors of our twenty-ton class, have been exceptionally successful. The yawl *Ailsa*, recently purchased by an American, and *Shamrock I.*, are the two largest yachts Mr. Fife has designed. Under Captain Wringe's charge *Ailsa* finally got on level terms with *Britannia*, but before she had an opportunity of showing what she could do under her cutter rig the interference of the Yacht Racing Association with the time allowance to be given by large cutters compelled the *Ailsa* to have her rig shifted to the yawl rig. Since the *Ailsa* has been purchased by an American owner, American yachtsmen will have an opportunity of testing her speed.

The racing career of *Ailsa* and *Valkyrie III.* having been cut short by the legislation of the Yacht Racing Association, the designing and building of challengers for the *America's* Cup offered the only outlet for the improvement of our national rig—the cutter's rig—as effectually embodied in yachts of 100 tons or over, and Sir Thomas Lipton's challenge to race for the Cup promised a pleasant relief to the forebodings over the decay of our national sport. From the remarks I have made Sir Thomas was perfectly warranted in commissioning Mr. William Fife to design *Shamrock I.*, and from the earlier trials between this cutter and the defender *Columbia* it seemed evident that whichever cutter won the finish would be a very close one. That it was not so was a great vexation to Clyde yachtsmen at any rate. One peculiarity in connection with the racing between *Columbia* and *Shamrock* was that no observer appeared quite certain as to the best points of either yacht. If Fife's racing cutters have one special merit it is fast reaching, but apparently *Shamrock* had no exceptional merit in this direction. At times *Shamrock* showed she could not lay as high a wind as *Columbia*, and in a breeze this was very evident.

In the Clyde there remained the conviction that with some alterations *Shamrock* could renew the contest with a successful result, but Sir Thomas Lipton closed the debate by expressing his determination to renew the challenge and build a new challenger. Mr. Watson accepted the commission to build the new challenger, and in preparing his design was guided by a long series of experiments in a large tank built by Messrs. Denny of Dumbarton in their yard for testing the models of the many fast steamers they have built. These experiments seem to have satisfied Mr. Watson on various points, one of which was that the very sharp bow with which our yachts are built does not insure exceptional speed through the water. Further, that a round side rather than the flat side with which our yachts have been built is no hindrance to speed, ensures stability, gives increased power to the helm, enables a vessel to stay more rapidly, and, generally speaking, improves her work to windward. Of course it remains to be seen whether or not these points have been gained in the new cutter.

ROQUE—MODERN CROQUET

By W. H. Wahly, One Time Champion

AFTER a national tournament less than half a dozen years ago, before the name of the game was changed to roque, *Harpers Weekly,* in commenting upon the meet, had this to say: "Only a bold man would dare to be known nowadays as the croquet champion. Proficiency in that sport has come to be rated by the vulgar in the same class of accomplishment as superior skill in tatting. Young persons smile incredulously when their elders recall the time when strong men took hold of croquet and played it hard all day, and believed that they were having sport. Yet the thing did happen thirty years ago, and modern croquet is a better game than croquet was then and fitter to inspire a champion's zeal." Roque, as perhaps a few know, is a game which has been slowly evolved from the old game of croquet, still played in various forms upon the lawns of many farmhouses and even given favor in some of our towns among the ladies and children, more from the fact that it presents an opportunity for a good frolic than as a means of displaying a completely planned and thoroughly thought out exhibition of skill.

In the mind of one who as a boy knew croquet arises a vision of hilly lawns, wire arches or possibly barrel hoops from a foot to fifteen inches in width, wooden balls, driven by long-handled mallets with ridiculously short heads, and a crowd of laughing, frolicking children. His picture of croquet is lifelike enough to speak, but to roque it bears but a slight family resemblance. It was this feeling of prejudice against the old game that influenced the National Association to change the name to roque in the hope that under a new designation the modern scientific game might attain to greater respect in the world of sport. Happily for the game and those interested in its development, prejudice is due alone to the lack of knowledge of the nature and methods of play in vogue today. Wherever roque has gained a foothold it has become popular with those who enjoy a sport which affords some of the

THE LAWN GAME CROQUET.

excitement of lawn tennis, and requires equal skill.

The origin of croquet is somewhat obscure, but though the exact date is considerably in dispute, it is generally conceded to owe its birth to the land of duellists and royal pretenders. From France croquet found its way into Ireland some time early in the eighteenth century, still in a very crude form, and differing very radically from the game of even 1850 or 1851, which dates are relied upon by some English authorities as those marking the introduction of the game into England. There are many to-day, however, who remember seeing a primitive croquet played in England at a much earlier date, and it is not unlikely that the Irish gave the game to the English shortly after it became known to themselves; for whoever knew an Irishman to keep a good thing to himself very long. In England, croquet, as it is still called there, has made but few changes in general methods of play, and these, in accordance with English traditions, have been most conservative. They still play with long-handled mallets and wooden balls upon grass-covered grounds, though they have narrowed and changed the number and arrangement of the arches. In many parts of England, as at Wimbledon where public matches have been held since 1867, croquet is played upon turf tennis courts, which while insuring a generally level surface, do not admit of such fine and delicate play as the dirt courts employed in American roque. This difference in methods has prevented the acceptance of challenges received from the Englishmen.

One of the skilful features of the American game is the carom shot, which is lacking in the English game because of there being no cushion or border upon which to make it. Using the playing ball to drive another, by a single stroke, into position is another important factor in the American game not nearly so general abroad where turf courts offer more resistance than lightly sanded prepared surfaces of clay or dirt used in this country.

With international golf, tennis, cricket and boat races, it is to be regretted we cannot institute and maintain a healthy rivalry in roque between the two great English-speaking nations of the earth; yet it is not improbable that a few rapidly passing years will have convinced the Englishman of the superiority of the character of roque played in America.

Practically taking up croquet where the English stand to-day with it, something like four or five decades ago, the idea was conceived of constructing a specially prepared court for the purpose of adding to the accuracy of play, and grounds were built of clay without a blade of grass upon them. These courts were levelled with great care and enclosed by running a plank border about them in a general rectangular form. The arches were of necessity narrowed and their number increased to add to the difficulties of the game. Men of brain demand both in business and pleasure

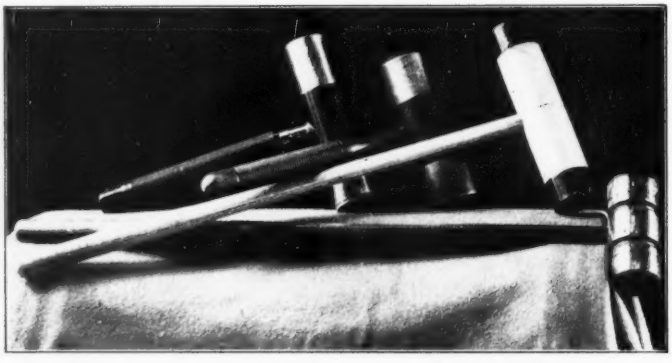
Photo by Washington Souvenir Co.

W. H. WAHLY, CHAMPION 1898.

CHARLES G. WILLIAMS.
CHAMPION, 1899-1900.

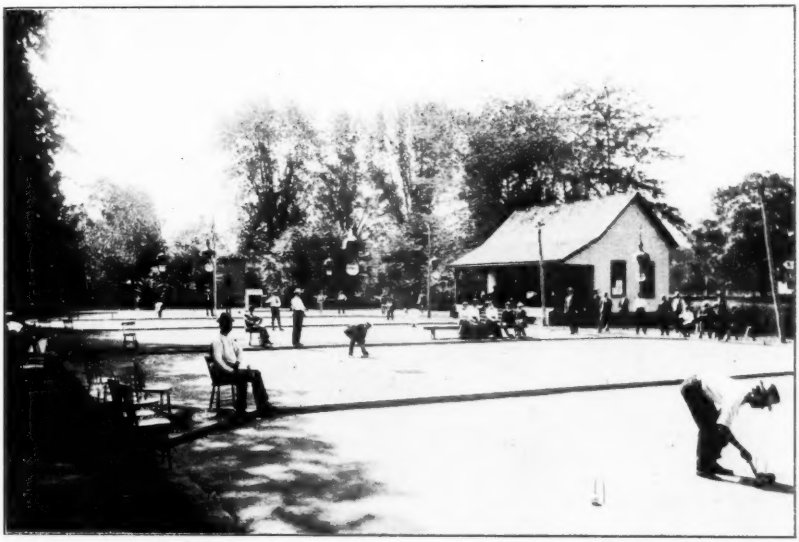
that whatever engages their time and attention shall require the exercise of ingenuity and skill. It is from this class roque is constantly recruiting, and it is not to be wondered at therefore that the game has so constantly improved, that to-day it is, to quote from the London *Spectator*, "fairly described as the most scientific of outdoor games. It is, they say, more exciting and more intellectual than golf, and involves the very maximum of pressure on the nerves and temper allowable by the regulations of civilized society." This was said by a London paper about the game as played at Wimbledon. What then would be its comment upon roque as played at Norwich, Conn., Washington or Cottage City, Mass., upon courts as level and smooth as a billiard table, with vulcanized rubber balls of a regulation diameter of $3\frac{1}{4}$ inches, which must be played through steel arches (sunk in heavy buried wooden blocks) the narrowest of which allow a leeway of but $\frac{1}{8}$ of an inch. In order to make still more difficult these already difficult arches, the steel is carefully selected to secure sensitiveness to the slightest touch of the ball. Instead of long-handled mallets a shorter handled and much heavier instrument is used in roque. To the uninitiated instrument may seem hardly the proper word. None the less it is used advisedly to describe the exactness and accuracy of the nickelled steel bands securing the ivory or vulcanized rubber face on the one end of the mallet head and the soft rubber face of the other end. The handle of the modern mallet is a steel rod with a shell of wood about it for a more reliable grip and varies in length according to individual taste from 10 to 16 or even 18 inches, while the heads range in diameter from $1\frac{7}{8}$ to $2\frac{3}{8}$ inches and in length from 7 to 10 inches. The weights differ quite as much as the cost of the mallets, the former ranging from $1\frac{1}{2}$ to $2\frac{1}{2}$ pounds, while as much as $15 or $17 may be paid for a single mallet.

The border or timber which marks the



ROQUE MALLETS.

court is perhaps the greatest single feature in which the game of to-day differs from that of a quarter of a century ago, when the possibilities of carom shots were undreamed. The original use of the plank border was simply to confine the balls and consequently the play, within the regulation court space, which was 45 by 80 feet until a comparatively few years ago when the dimensions were reduced to a plot 36 by 72 feet. The old border had corner pieces 18 inches in length which were placed so as to cut off the four rectangles of the court, but when the size of the ground was reduced the short corner pieces were replaced by ones



NATIONAL ROQUE ASSOCIATION GROUNDS, NORWICH, CONN.

eight feet long, which, to borrow a billiard term, are calculated to give greater opportunity for round-the-table play. With the other changes which the progressive spirit of its devotees have demanded came the heavy timber border permitting of carom or bank shots, and this development has gone on until to-day the most progressive clubs have equipped their courts with rubber cushions, similar in construction to those on billiard and pool tables. Electric lights in many places are used where play after dark is desired, and this makes the game enjoyable in climates where the midsummer sun has great power during the day, and no play is attempted until after sunset. With the introduction of the carom shot and the rubber cushion, the favorite jump shot of some of the best players has to a great extent fallen into disuse, and the more scientific and skilful bank shot been substituted. The jump shot was effected by striking the ball smartly upon the top and slightly to the rear of the center and was used when no straight shot for a ball presented itself by reason of the intervening arch or arches. This blow caused the ball to bury itself slightly in the surface of the court, and in starting away from the mallet rise to a hight sometimes sufficient to leap successfully over an arch perhaps a dozen or fourteen feet distant and strike a ball beyond.

Rubber borders have added almost infinitely to the possibilities of the game, and plays are now frequently made which, considering the amount of ground over which the ball travels, surprise even a billiardist with their accuracy. Single, double and even triple caroms are frequent occurrences between expert players in the hard fought contests. The similarity of roque to billiards may be emphasized by the very significant and generally accepted

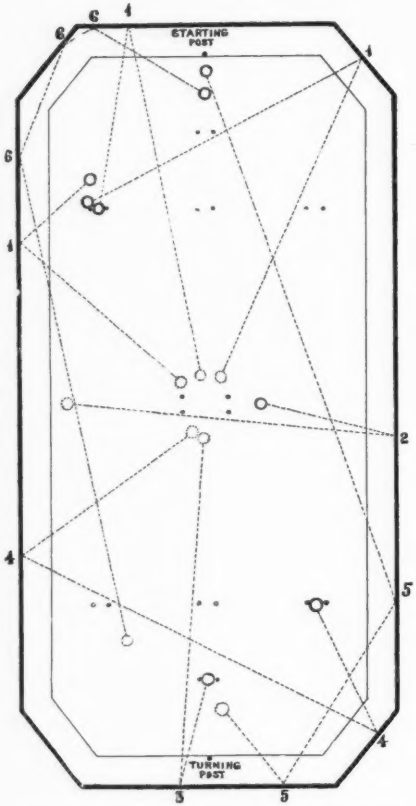


DIAGRAM OF ROQUE COURT* (36 x 72 FT.)

fact that knights of the cue are conspicuously successful upon courts admitting of carom play especially if these are equipped with rubber cushions. The cushion generally and the rubber ones more particularly have made less secure the practice of "tying up," which is a similar move to "wiring" the opponent's next playing ball, so that when the player has advanced as far as he can upon that turn of play and is obliged to stop, his opponent's "hot ball" is in such a position that he is unable to shoot straight at any of the other balls. In such a situation the player of the involved ball must betake himself to the cushion and if skilful enough he may secure the balls on a carom. A few of the caroms most frequently seen are illustrated below. The one numbered 3 is made by using the soft rubber end of the mallet and giving a quick "pull in" just as the ball is struck, imparting to it the "English" or twist which brings it back at a seemingly impossible angle.

With improvement of playing paraphernalia, rules, of course, have undergone changes, but through the organization in 1882 in New York city of the National Roque Association of America, the principal clubs are now playing under a uniform code, which is in striking contrast with the situation in England, where there seems to be little or no concerted action by the various clubs.

Unlike the old game of croquet, but two players ordinarily participate in roque, each playing two balls.

Among the many things necessary to possess in order to excel in roque is the ability to hit the balls when opportunity presents, even though the coveted ball be distant possibly sixty feet; yet the most brilliant long shot cannot expect to win roque laurels unless he is a fairly good general withal. In fact some of the most successful players of the game to-day have not won their high places by conspicuous ability in hitting at long range, but rather by superiority in planning and executing their plays well and safely, after getting possession of the balls.

At Norwich, Conn., the third week in August of each year, is held the annual championship, and entries come from as far west as California and as far south as Florida to contest for first honors and to enjoy the many pleasures incident to these great roque gatherings.

Roque, in its high state of development, is essentially a young man's game, as the last half dozen tourneys have emphatically demonstrated. There are, of course, notable examples of men in middle life yet to be reckoned with in any contest for first honors, but a steady nerve and a clear and correct eye command a high premium, and these qualities come most naturally, of course, from the young.

*Showing some of the cushion or bank shots most frequently made, from involved positions either in or behind the wickets.
1, 1, 1. Single banks for balls at the "cage" or center wicket. 2. Single bank employing left-hand "English" for balls wired across the "cage." 3. Single bank with left hand "English" for balls in the "cage." 4. Double bank for balls at the "cage." 5. Double bank for balls behind the 7th arch. 6. Triple bank for balls near the 5th arch.

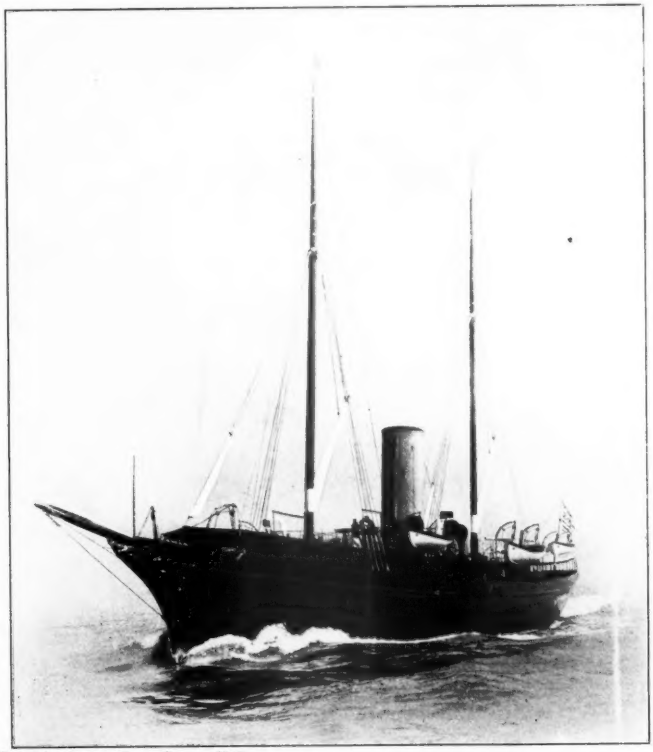
THE TREND OF STEAM YACHT BUILDING

By S. W. Barnaby

(Of the Messrs. Thornycrofts)

THE line of progress in the construction of steam yachts, both large and small, has been, generally speaking, in the direction of increase of speed. Thirty years ago with the exception of one or two very large yachts like the *Mahroussa*, designed by O. W. Lang for the late Khedive of Egypt, which attained the high rate of speed of 18.5 knots, the large majority of seagoing yachts had a speed of about 10 knots. The *Mahroussa* was 400 feet in length over all, 42 feet in beam, and 29 feet in depth. She drew fifteen feet of water, and had the oscillating paddle engines introduced by Messrs. John Penn & Sons, surely the most interesting type of engine to watch in motion ever constructed. They developed 6,400 horsepower with a steam pressure of thirty pounds and ran at twenty-six and a half revolutions per minute. The boilers were of course of the old tank type. Nine hundred and fifty tons of coal were carried. She was considered a marvelous success in her time, but her load displacement was over 4,000 tons, and the price of such a vessel put her beyond the reach of all but very wealthy people.

It was thought to be impossible at that date to drive small launches at a very high speed. With the proportion of length to beam, which was then in fashion, common observation had shown that the power re-



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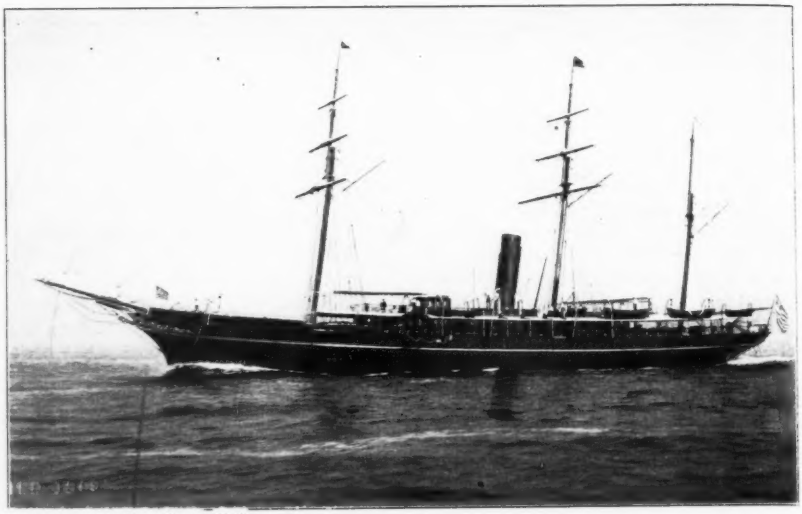
MR. J. PIERPONT MORGAN'S *CORSAIR III.*



Copyright photo by James Burton, N. Y.

MR. HOWARD GOULD'S *NIAGARA*.

quired to force them to a high speed grew at an alarmingly rapid rate. After a certain speed was reached, which was roughly equal to the square root of the length, that is, say seven knots in a fifty-foot boat, or ten knots in a 100-foot boat, increase of engine power seemed to have but little effect on the speed. It caused the boat's bow to stand up on end, and produced large waves, in the creation of which the engine power was uselessly expended.

In 1872, Mr. John I. Thornycroft surprised everyone by the results he obtained with the *Miranda*, a steel steam launch built

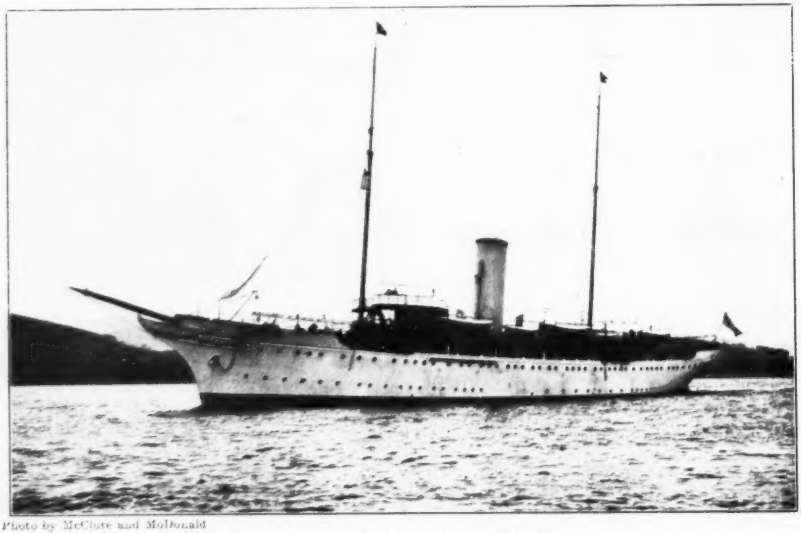
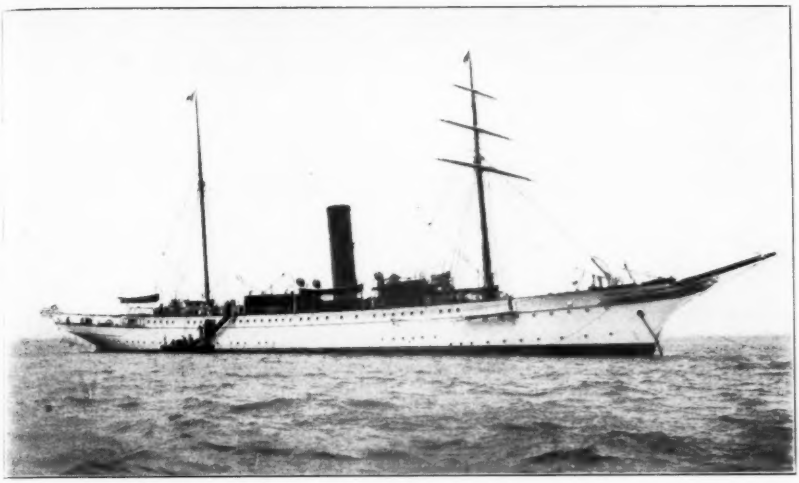


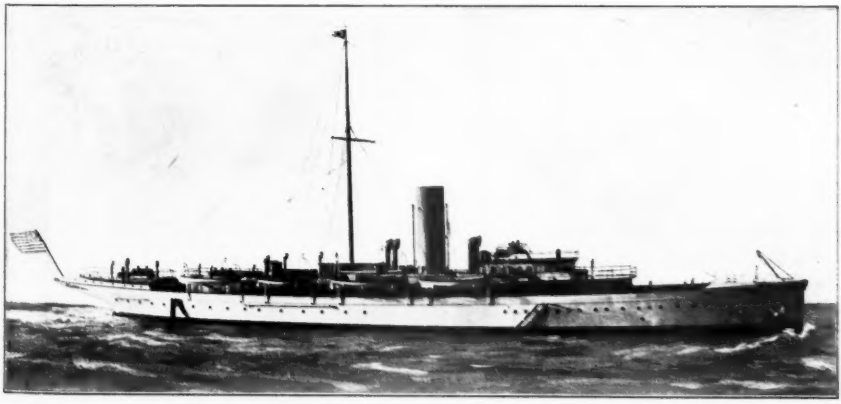
Photo by McClure and McDonald

MR. A. J. DREXEL'S *MARGARITA*.

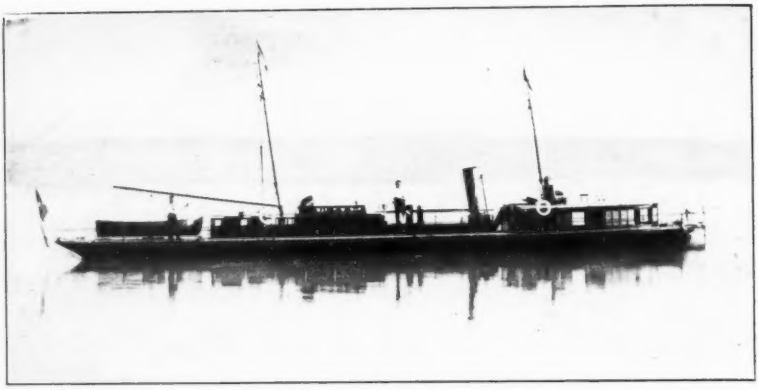


MRS. GOELET'S *NAHMA*.

for Lord Clarence Paget. These were first authoritatively announced to the world by Sir Frederick Bramwell, who had made experiments with the launch which he described in a paper read before the British Institution of Naval Architects. Although only fifty feet long the *Miranda* attained a speed of nearly nineteen miles an hour, which said Sir Frederick Bramwell, "even in these days would be considered very good for the finest seagoing steamers, and has hitherto been regarded as impossible unless the vessels were at least two hundred feet in length." The speed was achieved by adopting a suitable proportion of length to beam, by building the hull of very light steel plates and angles, the latter being specially rolled in sections not hitherto in the market, by using very fast running engines, five hundred and fifty revolutions per minute, of very light construction with wrought steel columns, quite novel at the time, high steam pressure, and, perhaps most important of all, by introducing a type of boiler which had up to then only been used on railways, and known as the "Locomotive." All these devices, however, although they were an enormous advance on what had been done before, would not have sufficed to enable a small boat of the size of the *Miranda* to attain such a high



MR. JAMES GORDON BENNETT'S *LYSISTRATA*.



BARONESS ROTHSCHILD'S *GITANA*.

speed if it were not that a change takes place in the behavior of the vessel when forced very hard, which at that time was not suspected.

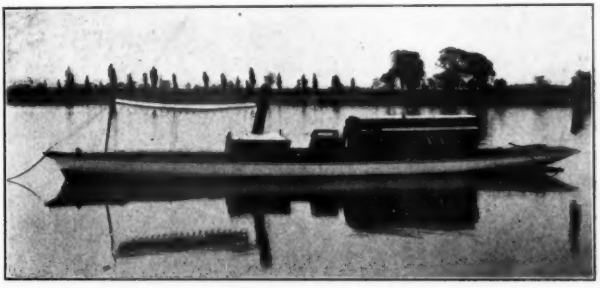
It was known that a curious phenomenon occurred in connection with towing light barges in a canal. If the horses were whipped up to a canter, the barge was caused to ride upon the top of a wave which traveled along with it, and the resistance was then much less than at a considerably lower speed. But this "canal" wave, or "wave of translation," as it is called, can only be formed in a confined channel or in shallow water. Under special circumstances, when the depth of water under the keel of a boat bears a certain relation to the speed, the boat will travel more freely as it runs on the crest of a wave of translation something like the canal barge does, although the usual effect of shoal water is to increase the resistance and cause the boat to drag more heavily.

The improvement which takes place in the behavior of small vessels, forced at a high speed in deep water, is due to a different cause. The rate at which the resistance of the vessel increases with the speed undergoes a change after a certain stage has been reached. Every additional half-knot after that point has been passed becomes easier to get, instead of more difficult. The *Miranda* was the first boat to get over the hill, which it was supposed would continue to get steeper and steeper! Many people think that the improvement is due to the boat lifting herself partly out of the water. There is no doubt that boats built of a suitable form could be made to rise in the water and skim upon the surface, as an oyster shell will do, if sufficiently powerful engines could be put into them to give them a speed high enough in proportion to their length. The punt-shaped boats, with flat bottoms, used on Canadian water shutes are a familiar example. The velocity given to them during their descent of the incline is sufficiently

THIRTY-FOOT LAUNCH BUILT FOR THE GRAND DUKE ALEXANDER OF RUSSIA.

great to make them skim the surface and buck along the water for many yards, and small boats can be towed at a speed which will make them do the same thing, the displacement being very much reduced, and the pull on the tow line being actually less than at lower speeds before lifting takes place. Model boats have been driven in this way on the surface by a rocket tube discharging over the stern. A cannon ball which ricochets along the surface may be likened to a vessel having an enormous speed in proportion to its length. It has indeed been well said by Lord Kelvin that "If a horse could gallop fast enough it could gallop over the surface of the sea without sinking in." We may yet see steam launches approaching this condition when engineers have succeeded in getting much more power out of a ton of machinery than is got at present.

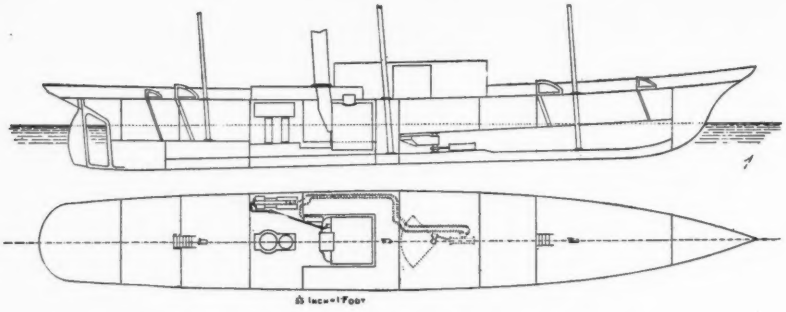
M. Raoul Pictet, the French chemist, built a vessel intended to skim upon the surface, but he failed because the power he could obtain from a given weight of machinery was altogether inadequate. The bottom of his boat was formed of three wedges, the idea being that the inclined surfaces would cause the boat to rise. If this is ever achieved it will only be in smooth water, and there will always be some danger of capsizing as the stability when skimming is not very great, as can be seen in the before-mentioned water-shute punts.



MR. WM. WALDORF ASTOR'S *MIGNONETTE*.

Although it is possible that a lifting occurs in some degree at the speeds now attained, there seems to be little direct evidence of it. No doubt there is a rising of the boat above the undisturbed water-level, due to her being lifted on the back of a wave which the bow sometimes overhangs, in such a way as to be clear of the water altogether, as shown in the photographs of yacht pinnaces at full speed, but it does not follow that the displacement of the boat is actually less. It seems more probable that the improved performance at high speed is due to there being less wave making after a certain critical speed has been passed. What the critical speed is depends upon the length and form of the ship. Sir Nathaniel Barnaby has thus described what takes place: "The propelling power in the ship is largely expended in making trains of waves. The surface water put in motion by the passage of the ship reaches the position of rest in that way, and the ship has to pay for the re-arrangement. The wave-making expenditure increases within certain limits at a very rapid rate, as the speed of the ship increases. When the limit is reached there is an apparent change in the behavior of the fluid through which the vessel is forced. In a vessel 185 feet long this change for the better begins when the vessel reaches a speed of 24 knots. The longer and heavier the ship, the higher is the speed at which nature begins to favor the engineer in his attempts to fly. In what way she makes this apparent change in her methods is not easy to explain. Sir William White says 'the boat travels upon the back slope of a wave having the same speed as herself.' She is seen to rise in the water, the bow is eventually lifted out of it, and the vessel settles down to speeds gained with comparative ease under the new conditions. Rails appear to be laid for the boat, length by length, before her forefoot, when the power in the control of the victorious engineer can no longer be denied."

The *Miranda* was the forerunner of a large number of river launches of similar type. The *Mignonette*, for instance, built for Mr. W. W. Astor, for use on the Thames, where high speed is now prohibited, has a speed of 18 miles per hour. Still more recently the *Bedouin* was built, very like the *Mignonette*, but having a draught of water of 11½ inches only. She is driven by a special



STEAM YACHT *CECILE* FITTED WITH STEADYING APPARATUS.

form of propeller known as the screw-turbine. It is placed in a tunnel under the boat's stern, the crown of which rises above the level of the water, so that the screw can be of larger diameter than would otherwise be possible. The screw blades are completely protected by a tube which surrounds them.

The *Gitana*, a steam launch, was built for the Baroness Rothschild, for use on Lake Geneva, and for very many years was the fastest vessel on the lake. She is 86 feet long, and 12 feet 9 inches beam, and has three cylinder compound condensing engines developing 460 horse-power. Her speed was 20½ knots. She was originally fitted with a locomotive boiler but that was afterwards changed for one of the water-tube type, which occupied less space. In 1897 the late Mr. Henri Say of Paris had built by the Messrs. Thornycroft a steam yacht much smaller than the *Gitana* which must nevertheless beat her in speed. Notwithstanding the time which had elapsed since the *Gitana* was built, this was by no means easy to do, but the *Sevillana* reached a speed of 21.44 knots. The Baroness Rothschild was not content to take second place, and she immediately ordered a much larger yacht even than the *Gitana*, practically a first class torpedo boat, and this vessel now holds the record on the lake.

The comparative smallness of British rivers and the amount of traffic upon them has checked the development of speed in river launches in that country. In America some very high speeds have been attained.

In seagoing yachts the tendency seems to be always towards higher speeds and greater capacity for making extended cruises. The large two-masted schooner *Nahma*, which was designed by G. L. Watson, and built at Clydebank for Mrs. Goelet is a case in point. Her dimensions are, length 289 feet, beam 36.7 feet, depth 17.7 feet, tonnage 970. This vessel has a speed of 16½ knots, and can carry 500 tons of coal. Her consumption is 24 tons per day at a speed of 12 knots, and 38 tons per day at a speed of 14 knots. With coal for 20 days steaming she could undertake any voyage required of her. The bridge deck extends for 184 feet amidships. The *Nahma* carries five boats and two steam pinnaces.

The *Margarita*, also designed by Mr. Watson, for Mr. A. J. Drexel, is 288 feet by 36.6 feet, and draws 16.6 feet of water. Her engines of 5,000 indicated horse-power drive her at 17 knots. This horse-power is equal to that of the White Star liner *Britannic*. She has a continuous double bottom and ten water-tight compartments. Sixty-eight men form her complement. The coal capacity is 550 tons. She carries eight boats, among which are a steam launch and a liquid fuel launch.

The *Lysistrata* by the same designer, and owned by Mr. J. Gordon Bennett, has a length of 286 feet, beam 39.9 feet, 2082 tons measurement. Her engines are of 7000 indicated horse-power, and she has attained the high speed of 19.5 knots. Her crew consists of 100 men.

These represent some of the best modern fast yachts. They are as a rule fitted with marine type boilers, but there is a tendency now to divide the power between marine boilers and water-tube boilers of the small tube express type, with a view of getting greater maximum power in a given weight of machinery, and also of getting up steam more quickly, and thus avoiding the neces-

sity of banking fires when lying for a short time in harbor.

The boat shown on page 670, 30 feet long, and constructed of wood, was built for the Grand Duke Alexander of Russia. The engines are triple expansion working with 250 pounds of steam, and at 550 revolutions per minute. Her speed was 13¾ knots.

A few years ago an interesting experiment was made by Mr. Thornycroft by fitting moving ballast in the hold of a yacht for the purpose of reducing rolling in a seaway. The yacht upon which the apparatus was fitted, the *Cecile*, page 672, was not very suitable for the purpose, as she was a vessel of great stability, and her excessive stiffness not only caused her rolling motion to be very rapid, but made it necessary to employ a relatively large moving weight in order to keep her upright in the waves. The *Cecile* was 230 tons displacement, and the moving ballast, amounting to eight tons, represented about 3½ per cent. of the displacement. Although this weight was only sufficient to incline the vessel two degrees when moved out as far as possible from the center-line, it had a very marked effect in reducing the rolling. The illustrations show how the ballast was fitted. The eight tons of lead, in the form of a quadrant, was pivoted on a vertical shaft, below the cabin floor, and was free to turn completely round. It was thus quite out of the way, and the installation of the whole apparatus was effected without any alteration in the accommodation of the yacht. The movement of the shaft was controlled by a hydraulic motor, fitted with a valve for distributing water under pressure. This valve was controlled by an automatic device in such a way that the weight was caused to move either to one side of the ship or the other, as was necessary to keep her upright among waves. The automatic device worked admirably, and although the weight was insufficient to completely counteract rolling, it very greatly reduced it.

The amount of weight required to obtain a perfect balance can easily be estimated for any vessel among waves of any given size. Suppose it is wished to balance a ship among average Atlantic waves, which may be taken as about 180 feet long. Such waves have a maximum slope of about seven degrees. If such a weight is provided that when out to the fullest extent of its travel on one side of the centerline of the ship it will incline her seven degrees in still water, this weight will suffice to keep the vessel quite steady among any waves having a slope not exceeding seven degrees. But the ameliorating effect of a very much smaller amount of weight than this is considerable. Suppose, for instance, the weight employed is only sufficient to incline the vessel 3½ degrees in still water, the roll due to a wave slope of seven degrees would be reduced by one half. The heavy rolling occasionally met with in Atlantic steamers and in large yachts, which are made tender for the purpose of making the motion easy, is not caused by waves of a very steep slope, but by a succession of waves keeping time with her swing, and this can be stopped with a very much smaller weight than would be necessary to heel the ship over to the large angle sometimes attained; in fact a very moderate weight would suffice to prevent it.

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THE CUP'S EFFECTS ON AMERICAN MARITIME AFFAIRS

By John D. Spears

ON August 8, 1870, "nearly all down town business was suspended, and Broad and New streets were well nigh deserted," because "all New York was upon the water" to see the schooner *Cambria*, belonging to Mr. James Ashbury, make the first of the magnificent series of races that have been held at this side of the Atlantic for the *America's* Cup. It was a notable day, but the exuberant joy of the throngs afloat, when the foreigner was defeated, was not, as we can see now, well founded. This is not by any means to say that the *Cambria* was a faster boat than all of the nine that came in ahead of her, for, as she was rigged and handled, there were several of the nine that were better than she was. But if there was any good reason for the existence of a Cup that should be and remain "perpetually a Challenge Cup for friendly competition between foreign countries," that reason was found in the fact that such a "friendly competition" would in general promote interest in yacht racing, and so it would in particular do more than anything else conceivable to develop the swiftest possible yacht. Mr. Ashbury brought a good schooner, but instead of meeting him with the best schooner on this side we met him with a fleet; and that was done because the *America* had won the Cup in a race against a fleet. The race was as fair for the *Cambria* as the original race was for the *America*; but we can see that it was not a fair test of the relative merits of American and British yachts.

Photo by James Burton.

THE *AMERICA'S* CUP.

When Mr. Ashbury came again we partly saw our error; we met him with one yacht at a time. A most remarkable statement, one that is true, as well as remarkable, is found in Coffin's history of this race. Coffin tells how the *Columbia* was chosen to meet Mr. Ashbury's *Livonia*, how she won on October 16th, and again on the 18th. The third race was set down for the next day, October 19th, and *Columbia* was

again chosen to meet the challenger. Thereat Coffin says:

"The *Columbia* was all right but her crew decidedly were not. They were beaten out with the labor of the two previous races." And because the *Columbia's* crew was not in good condition she was beaten by the challenger! No one, as the newspaper accounts of that day show, gave any consideration to the fact that the crew of the British yacht had been working just as hard as the crew of the *Columbia*, and were likely to be quite as much "beaten out." No one considered, that is to say, how unfair it was to pit a fresh crew against the worn crew of the challenger, as was done in the fourth race.

But we were unfair in one other way than that of pitting a fresh crew against a worn one. In those days the all-around yacht —the yacht that can sail well in all winds —had not been built. There were yachts that won in light airs only, yachts for all-plain sail breezes only, and yachts for close reefs and housed topmasts. No one then ever dreamed of building a yacht that should be best in all weathers, although the performance of the *Columbia* in the second race should have given some yachtsman ideas in this matter. But, fully believing, as we then did, that one yacht was good in light winds only, and another in heavy winds only, we were willing to select a defender according to the weather. We would make the heavy-wind challenger meet a light-weather boat on a light-wind day.

Consider next the *Thistle-Volunteer* race. When the match was made Mr. Watson, who designed the *Thistle*, agreed definitely that he would bring a challenger of a specified length, but he deliberately built and brought one a foot and a half longer on the water line. He thought to win the cup by this trick. And the *Thistle* seemed so swift when she was slicing to and fro above the starting line off the Owl's Head that many a patriotic heart sank at sight of her. At the signal to go the *Thistle* led the way across the line, on the port tack (the wind was coming up through the Narrows), and stood across toward Staten Island. The *Volunteer* crossed on the same tack, being somewhat out on *Thistle's* weather quarter but clearly behind. When about half way (perhaps less than half way) across to Staten Island, the *Thistle* tacked and headed back toward Long Island, while the *Volunteer* kept on toward Staten Island, even though she had to ease off a bit to pass astern of the *Thistle*. The landsmen afloat as spectators, on seeing this, supposed that the challenger was increasing her lead still more, and became still more depressed, but the harbor pilots in the fleet grinned and said nothing.

For about ten minutes the two yachts held on, the *Thistle* toward Long Island and the *Volunteer* toward Staten Island. Then they tacked to head on converging courses, and of the tens of thousands of people afloat many almost held their breath in their eager interest in the race. The chatter, even on the big excursion steamers, ceased absolutely. The excitement became intense all over the fleet, but when the yachts were a few lengths apart, the skipper of a little harbor tug, seeing clearly that the *Volunteer* would cross the bows of the *Thistle* reached for his whistle cord and broke the dead silence with a series of squeaks: "Teet, teet, tee— teeeeeeet!" At that every steamboat pilot afloat threw his whistle wide open, and the welkin rang with such a noise as had never been heard in the harbor before. And yet there was literally almost nothing for the throng to cheer over! The *Volunteer* had, indeed, gained the lead, but she had done it by keeping on toward Staten Island where the tide was running down toward the Narrows, while the *Thistle* had been bucking against the flood tide that was coming up the Long Island shore. The American yacht captain knew the waters of the bay while the British captain did not.

No other incident in the history of the *America's* Cup illustrates so well the unfairness of what was known as the New York Yacht Club's regatta course. Because the *America* was compelled to sail over a course that was of varying tidal currents, when she won the cup, we compelled seven different challengers to sail over much the same kind of a course. Every one knows now that the *Volunteer* was a far swifter boat than the *Thistle*, and she proved that she was in that part of the first race course lying outside of the Hook. The race is referred to here solely to emphasize the fact that when next a challenger came we were ready to

grant a series of races in water where a fair test of yachts might be had, a test in which the challenger was not obliged to hire an American pilot to help his crew.

The second race of the first *Valkyrie* with the *Vigilant* illustrates one other feature of the international races worth consideration. That race was sailed in the run, so to speak, of a cyclone. A cyclone was coming up the coast and in consequence a strong easterly yachting breeze prevailed. In the thrash to windward the *Valkyrie* fairly beat the *Vigilant*. In the home run the *Vigilant* overhauled and passed the challenger, but she was able to do it solely because the British crew did not handle their spinnaker in proper fashion. They set it flying, sawed it over the head stays and cut a hole in it. Then the breeze blew it to shreds. A lighter one was blown away next, and finally a big jib was set in the spinnaker's place. Now this *Valkyrie* had a series of three races only to sail, and it was made certain by this mishap that a series of three is not enough to eliminate the element of luck from the test. No one doubts now that *Vigilant* was on the whole superior to *Valkyrie I.* but we should feel better if she had won three out of five races, instead of two out of three.

Still another feature of the old-time races may be mentioned—the time limit. I recall the second race between the *Mayflower* and the *Galatea*, as an illustration. It was a day of shifting and light airs. The *Mayflower* had the best of these, and so, having arrived, just in time, though it was after sundown she was declared winner. With a time limit of seven hours it is likely that *Shamrock I.* would have won two or three of her races with *Columbia*—perhaps she would have won the cup—and yet it is perfectly clear to all now that in a steady breeze the *Columbia* is much the better boat. The seven-hour limit let in the element of luck; it did not give a fair test of boats. Other unfair features of early races might be mentioned, but enough has been recalled to emphasize the assertion that, because of what has been learned in the *America's* Cup races yachtsmen have become so fair-minded that they now refuse to accept, let alone seeking to gain, any unfair advantage. In short, it is not too much to say that the races for the *America's* Cup have taught yachtsmen, first of all, a clean love of honor. The typical yachtsman is as free of tricks and "jockeying" to-day as he has always been of cant. In all races, as well as in the races for the cup, every yacht has a fair chance.

What we have learned about yacht construction—that is to say, the science of yacht building—has not progressed quite so far. In the management of races we have reached human perfection, if that term may be allowed; in yacht building we have something yet to learn, as all admit, and even what we have learned is not in every feature beyond dispute. There are many yachtsmen who will not agree with me when I say that the international races have demonstrated the superiority of certain features of our yacht construction. But in spite of that we may consider what has been done. Without saying that the New York Yacht Club rule of measurement is the best conceivable, it is to my mind the best in existence, because it hampers the designer least in his efforts to construct a swift ship. Every one familiar with the history of shipbuilding knows well that laws governing the measurement of ships, even during the nineteenth century, were worse than absurd. They led to the construction, in some cases, of ships having a model like the figure 8, and in nearly all cases to the building of the wretched model having sides that tumbled home. When national legislators deliberately made and maintained laws that drowned hundreds of seamen every year, it could not be expected that even such intelligent sailors as the yachtsmen were would provide perfect rules for the measurement of their boats. At any rate, we find that the New York Yacht Club, as custodian of the *America's* Cup did in 1871, make a rule of yacht measurement that distinctly favored what is now known as the skimming-dish model—the yacht that was broad and shallow. In Great Britain ideas that were directly opposed to these prevailed. They believed over there that a yacht more than twice as wide as she was deep was very unsafe, and so, lest the natural bravery of the British sailorman lead him to build wide for the sake of the advantage of beam in carrying sail, they taxed the beam in their measurement rule! They literally compelled a yachtsman who wished to win cups to build narrow and deep boats.

In America a favorite device for helping

yachts in windward work was what we called the centerboard. The British called the device a sliding keel, but they supposed the use of a centerboard made a yacht unsafe, and so refused to admit a centerboard boat to their races. I have always believed that the elderly, ladylike members of the British clubs held sway when measurement rules were provided, and I see no reason now for changing my views. Under the influence of the ladylike views of what was dangerous in yachting, and of insular prejudice as well, the British yachtsmen had developed in 1884, a type of boat of which two representatives, the *Genesta* and the *Galatea*, came across the Atlantic to race for the *America's* cup. Though 87 feet long on the waterline, the *Galatea* was but 15 feet wide and her draught was 13 feet 6 inches. Her stem was vertical; her bow was a wedge; her keel, while nearly horizontal, was something of a rocker, and her stern had an overhang that increased her over-all length to 102 feet. That was the ideal yacht of the British rule of measurement. With the *Galatea* in mind it seems that if we have learned anything about models it is that a pot-belly may do very well for a canal boat, but it is absurd on a yacht. The *Galatea* was the product of an arbitrary rule, born of fear; how could she be otherwise than absurd? A Raritan canal coal barge, if an overhang astern were added, would have in its model nearly every good point of the *Galatea*. We have learned at least that no such model is good for a yacht.

The wonder is that we have not learned also that while some sort of an arbitrary rule of measurement is unavoidable in a regatta where vessels of many sizes must be approximately equalized, we needlessly hamper the designer of a yacht intended for a cup race when we put any other restraint on him than length of load water line. Because of the vast expense of building a huge sloop we do well enough to limit the length to ninety feet, and in my judgment eighty would be long enough. Within the limit of length we should allow the designer full sway; we should sail the races without time allowance, and thus learn what model will skim, pierce, split or smash its way with greatest speed over a high-sea course.

At the time that the *Genesta* and *Galatea* were designed to fit the arbitrary British rule, the American rule had developed a type of yacht of which *Mischief* was a leader. *Mischief* was 61 feet long on the water line, 19.10 wide and 7.9 deep. The people who supposed the *Galatea* had an ideal model pointed to *Mischief* as a vessel that was wholly unsafe, and they referred to the *Montauk*, a vessel of the class, that had turned over and drowned some of her people. They declared that this model was wholly unfit for a sea-going yacht; in other words that it was absurd: the chief point of criticism being the relative proportion of breadth and depth. What we have learned about this matter is not yet beyond dispute, but here are some figures not disputed. *Mischief* was 2.4 times as wide as she was deep. The British warship *Goliath*, with thousands of tons of armor above her water line, is 74 feet wide and 26 feet draught; her beam is 2.61 times as wide as her draught. What her depth of hold is, does not appear in the register. but it is a matter of no consequence. The yacht *Columbia* with a beam of a little over 24 feet had an actual depth of hold of about 10 feet. *Valkyrie III.* was, I think, 26 feet wide to a depth of less than 11. In short every known yacht designer, when planning the swiftest possible boat, in these days, gives her more than twice as many feet in beam as he does in depth, —say 2.4 as much! The proportion of beam to depth of hold that prevailed in our old skimming-dish model is now found to be best for the races. This is not to say, of course, that *Mischief*, as a whole, was a good model.

On the other hand, there was one feature in the construction of the *Galatea* which we adopted straightway; she carried her ballast on the bottom of her keel and when we built the *Volunteer* we put all but ten tons of the lead on the bottom of her keel. Having learned to put the ballast on the bottom of the keel in order to increase its leverage when overcoming the power of the wind, we naturally added to that leverage by lowering the lead more and more; and we also added to its weight somewhat. We depend in part on the lead and in part on the beam of the ship to keep her upright under the growing breadth of canvas. We have not yet learned exactly where to stop lowering the lead, though the latest constructions

seem to indicate some figure not far from twenty feet below the water for a ninety-foot water-line boat. While we know that the beam should be more than twice the depth of the hold, properly speaking, we do not yet know exactly what is the best beam. And there is a question as to the quantity of lead to carry. The wider the beam the less the lead necessafily carried, of course. We know that the longer and smoother the lines and the smaller the displacement and wetted surface the swifter the boat, but the swiftest possible ninety-foot yacht has not been built. The present speed may be increased many minutes over the thirty-mile course. With improvements in the trussing of the hull we shall yet swing more than 15,000 feet of canvas above a hull that is longer and broader above water than any of the ninety-foot yachts yet developed.

Readers who have kept track of troubles in China are familiar with what has been said about "saving the face" of the government of that realm. By lowering the lead ballast on our hulls of skimming-dish model we have saved the face of those yachtsmen who advocated the use of the *Galatea* model. *Mischief* had a "sliding keel." In order to get the ballast low enough Mr. Herreshoff secured the "sliding keel" of the *Defender* in place, and screwed the lead to it. We build keel sloops now not because we think a centerboard "dangerous," (the *Montauk* went into the coast survey and was used off Hatteras), but because we did not need a centerboard when we had suspended our ballast to a thin web ten feet below the hull. One other feature in yacht designing has been developed, and with it another has been well nigh abandoned. The *Galatea* came here with a long overhang astern—15 feet. *Mischief* had some overhang, but we eventually learned that a long overhang was a good thing—so good that on recent yachts we have put nearly as much on the bow as on the stern. It is easy to see now that, while a boat with long overhangs is but 90 feet on the waterline when upright, she becomes 120 when she heels to a head wind. A proper overhang takes the place of beam and ballast, and lengthens out the lines that touch the water. But while the *Galatea* had a long overhang astern she carried a vertical stem and her bow was a wedge. The old American yachts had a curved—a "clipper" or "swan neck bow," but the bow was a wedge also. Now, practically, we have thrown the wedge-bow overboard. As the forward overhang has lengthened it has become more and more of the needle shape instead of the wedge. There is a shipbuilder up on Lake Superior who has demonstrated with many cargo ships that the wedge-shaped bows are not advantageous even on steamers; much less are they desirable in a heeling sail boat.

The lessons in the details of construction which have been learned are less easy to portray, but the advances there have been perhaps, more decided than in the form of the model. They are at least undisputed. From wood and iron we have advanced to steel and Tobin bronze. Steel spars, made of metal as thin as that in smokestacks, are found far lighter and yet far stronger than Oregon pine. Conservative as men of the sea are, a time has come when a marked departure has been made in the construction and placing of the ribs. So one may look forward to the time when instead of having all frames either fore and aft or athwartships they will be placed to meet the definitely ascertained and located strains on the magnificent hull. The *Galatea* came here with her mainsail sagging two feet clear of the boom when on the wind. It was secured at tack and clew only. The *Shamrocks* laced their mainsails to the boom. *Valkyrie I.* set her spinnakers flying; all spinnakers are now sent up in stops.

Our pessimistic writers who longed to see the *Galatea* carry the cup across the waters have been moved, now and again, to say that the building of the ninety-foot cup racers has been of no advantage to yachting. They declare that the ninety-footers are not yachts anyway, but mere fair weather racing machines. Yet from the time that the *Cambria* race drew all the people of New York to the lower bay down to the present year every international race has seen stronger as well as swifter competitors, and more capable sailors in the crews. With each succeeding race the number of yacht clubs and of yachts, and of men capable of building and handling yachts has greatly increased throughout the nation. Better yet, the interest in the races has turned the attention of more and more people to the sea. The heart of the backwoodsman and of the cowboy or the shepherd on the plains has thrilled at the reports of American superiority on the pleasure ship. This

stirring of their pride made men consider in the days when our naval ships were a disgrace to us, whether we ought not to excel in warships as well as in yachts. And now our navy, ship for ship, fears not to face any navy in Europe. Our yachting victories turned our thoughts also to our merchant marine, and a time has come when a Crowninshield not only designs a famous racer, but he designs and helps to build a merchant ship that is to be in some respects one of the most remarkable in the history of the sea. He not only designed *Independence*, but he designed and is part owner of the first seven-masted schooner, a steel vessel to carry 6,000 tons dead weight, that is now in course of construction. Nor is that all. An honored commodore of the New York Yacht Club, a man who made his business career in connection with railroads, a man whose money has been poured out with unstinting hand in defence of the *America's* Cup, has reached out recently for the transatlantic trade—has bought so many steamers in that trade that the owners of other lines have been frightened into a "combine" to maintain "British supremacy" upon the high seas!

The *America's* Cup, as a British-offered prize, was but an unconsidered trifle in the affairs of a few yachtsmen. It was worth 100 ounces of silver—in those days less than $500. But in its effects on yachts and yachting, and on ships and shipping—more important still in effects on American men and maritime policy—who can calculate its results?

CATTLE BREEDING FOR AMATEURS

SECOND PAPER

By Frank Sherman Peer

THE INFLUENCE OF FOOD

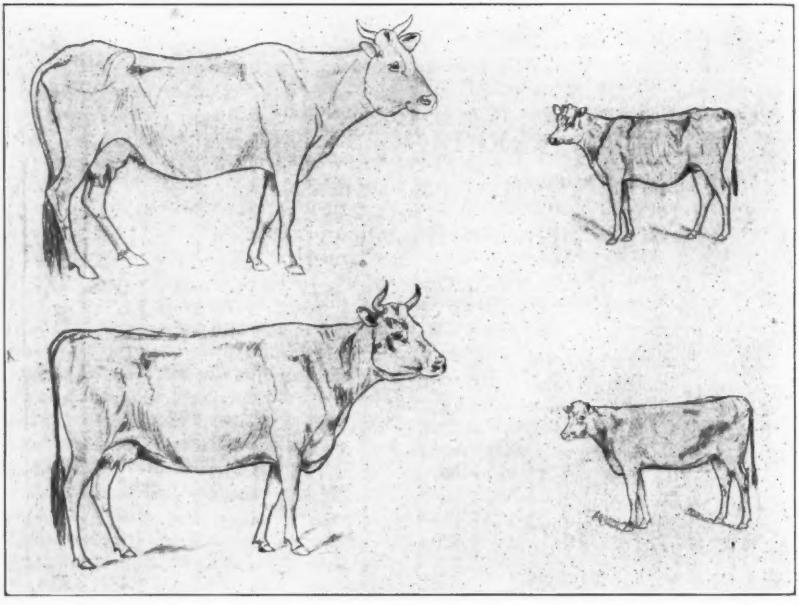
OF all the factors that assist in producing variations on which improvement is based, food is the most important. I am aware that some very good breeders place breed superior to feed, but this is manifestly a mistaken notion, because it is food in the first place that produces variations, while breed can do little more than help to sustain what food produces. It must, however, be clearly understood that while food plays the most important part in producing variations or abnormal characteristics, which in turn become acquired and thus transmittable characteristics, yet foods are only the colors in the hands of the artist. It is intelligence and skill in their application and design and management that produces the finished product.

The great hindrance to successful breeding, it seems to me, in America, is that we fail, first to realize how very artificial the improved breeds of cattle are, and secondly how great is the ever present tendency in them to revert to or towards their original inferior ancestors. We buy a high class bull and some cows to match and while we feed them well—often too well—they degenerate on our hands, because we treat them as if they were always the same superior animals that we bought; whereas the greater the cow is, in point of production, or the nearer she is to perfection in form, the more artificial she must necessarily be. Breeding on acquired characteristics is like building a cob-house. The higher and faster it goes up, the more liable it is to fall. I shall notice this point more fully in my next paper on "Breeding for Improvement," and for the present will confine the discussion to the influence of food and the intrinsic value of well-bred stock.

American breeders have been wonderfully successful in producing animals that are phenomenal in the line of producing great milk and butter records, which have not been approached by animals in Great Britain of the very best breeding, but this is more the result of skilful feeding than of skilful breeding. Feeding and breeding are not as some seem to think synonymous. A man can be a very skilful feeder and not know the first principles of breeding, but no man can be a successful breeder who does not know how to feed.

Some of the greatest dairy cows are degenerates so far as keeping up to the improvement in form goes, so that while they may have gone ahead in production, it has been done at the sacrifice of the more valuable qualities, *i. e.*, perfect form, and, although from a feeder's standpoint they are a success, from a breeder's point of view they are little short of failures. The feeder looks at food for what the cow is able to extract from it in the form of milk, and his actions are governed accordingly. The breeder looks at it as a factor towards improvement and ultimate perfection. What the latter wishes to know is, if food is the principal factor and man the agent of improvement, when is the time for him, and under what conditions must he operate, to produce these desired results?

ORIGINAL TYPE. IMPROVED IN DAIRY QUALITIES.



GENERAL PURPOSE COW. IMPROVED IN FATTENING QUALITIES.

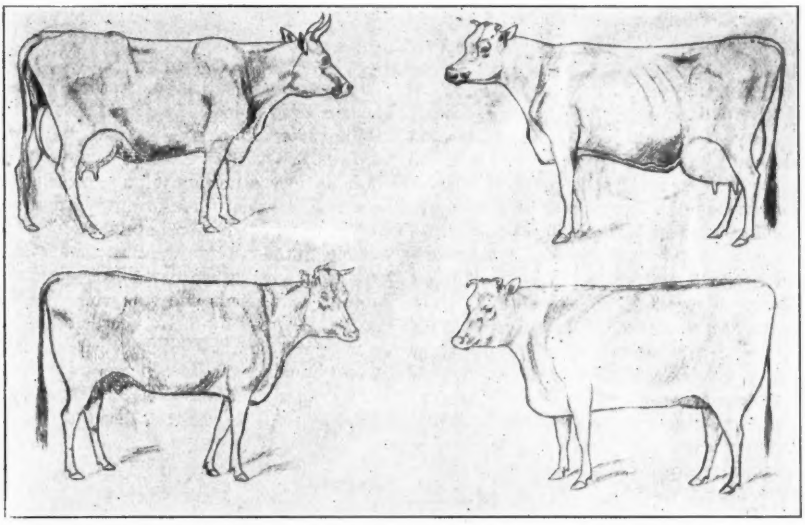
If a calf by a certain bull out of a certain cow develops into an animal that is superior to either parent, a variation has been produced, an abnormal tendency has been transmitted. It is safe to say, whatever degree of perfection an animal finally attains, that it received from its parents an impetus to carry it to that point. If that be granted then it follows, so far as improvement in the offspring is concerned, that improvement ceased at birth, for the impetus must have been given to it prior to that time. This leads us to say the time for the breeder to do his work towards improvement, the time when it is within his power to mould and fashion the plastic forms of his animals, must be prior to their birth; at that time the die is cast.

I have not the space to enter into the history of breeding for improvement except to say it was started in a very pronounced way by a Yorkshire Englishman named Blackwell. He was the originator of the Leicester breed of sheep and the famous long-horned cattle. Then came the Colling brothers of Durham, England, who produced what was known as the Durham cattle. These men had a great natural taste for breeding for improvement. Following them came the celebrated Mr. Booth and Mr. Bates, rival breeders, who produced the two famous shorthorn families that bear their names. Whether either the Colling brothers or

Blackwell acted knowingly upon the principle above presented or not, it is very certain that it was acknowledged and acted upon by both Bates and Booth, at least, this is the natural inference gathered from sayings attributed to them.

As an illustration of this principle we will start with an ordinary animal such as is known as a general purpose cow, and attempt to show how by care and feed her twin heifer calves may be improved, one in the line of earlier maturity and the greater production of beef, and the other towards the greater production of milk or butter. We will begin with the one selected for the beef illustration. A sire is selected for her that is fat or in high condition at the time of mating. The heifer is herself induced to take on flesh during the period of gestation, with a view to educating, if I may use the term, her unborn calf to make better use of the food consumed for the production of beef than did either sire or dam. The treatment of the calf after birth is along this same line; it is allowed to suckle its dam for three or four months and possibly has fresh milk from another cow or a foster mother as well. Soon after conception the dam is dried off and is again well fed during the second period of gestation. It was noticed by some of the early breeders I have named that to produce the highest development in early maturity and inclination to convert food into the greater amount of meat, that it was necessary to ignore in the animal, or dam, the production of milk, on the principle that there is only a certain amount of force in an animal and that the highest development of either milk or beef could only be attained by sacrificing the one for the other. The adoption of this principle, by using which Messrs. Booth and Bates produced such wonderful results, marks the beginning of an era since which Great Britain has established a long lead in the breeding of farm animals of all sorts and pet stock. The English have, in a little country about the size of the State of Maine, says Mr. John Wrightson, in a neat little volume on the live stock (of Great Britain) fourteen distinct breeds of cattle and twenty breeds of sheep.

IMPROVED DAIRY. IDEAL DAIRY.



IMPROVED BEEF. IDEAL BEEF.

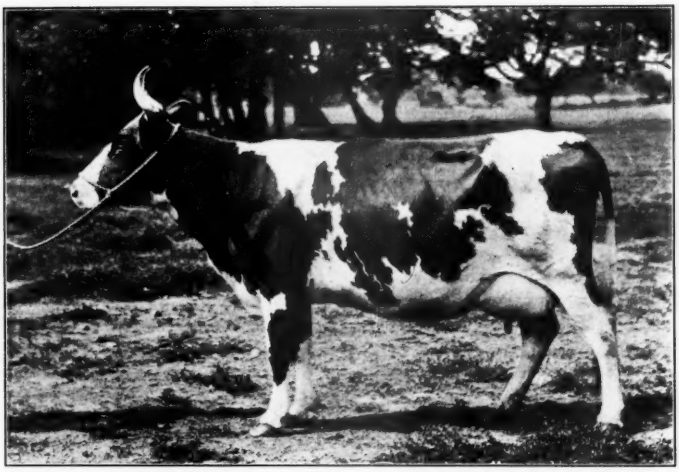
I will now return to the other twin calf and proceed with her in the line of improved dairy qualities. It will be noticed that the treatments of these two calves are, as far as possible, directly opposite. The heifer, in this case, is caused to drop her first calf by the time she is two years old; young mothers make better milkers than when

allowed to go another year. This calf is soon taken from the dam and is, after a month or more, fed on skim milk and so on to coarse, bulky food, whereas her sister was fed on rich, concentrated grains and sweet milk. The object in this dairy calf is to develop its digestive organs to the greatest possible extent, so that at maturity it can consume a great amount of coarse forage, as she must do in order to manufacture a great amount of milk. As soon as the heifer begins to "spring"—show udder development—for her first calf, she may then be fed liberally on bran and such other light feed to assist in the development of the udder and the dairy qualities generally. While carrying her second calf she is induced to give as much milk as possible, and is fed for that purpose to her fullest digestive capacity for digesting and assimilating and converting into milk, to a point where she begins to take on flesh; her fullest dairy capacity has then been reached, beyond this point extra food is wasted. Whereas the beefer was dried off soon after she became in calf, the dairy heifer is strained to the longest possible milking period consistent with the welfare of the next calf and her own dairy qualities. Thus their unborn calves may be expected to show abnormal tendencies, one in the direction of producing a greater amount of beef, the other a greater amount of milk, than their respective ancestors.

In turn two bull calves from a similar cow are treated in the same way, the schooling they receive, the abnormal characteristics they develop in these respective directions is relied upon to strengthen the same. By breeding them to the two heifers these abnormal variations become acquired characteristics. Now we begin to combine the influence of breeding with the influence of food and may reasonably expect this variation in time to become dominant and transmittable and in time produce in the matured animals two such dissimilar cows as are shown on pages 680-1, *i. e.*, the improved dairy and the improved beef. All the time however keeping in the mind's eye the ideals in each family to which we must ever steer.

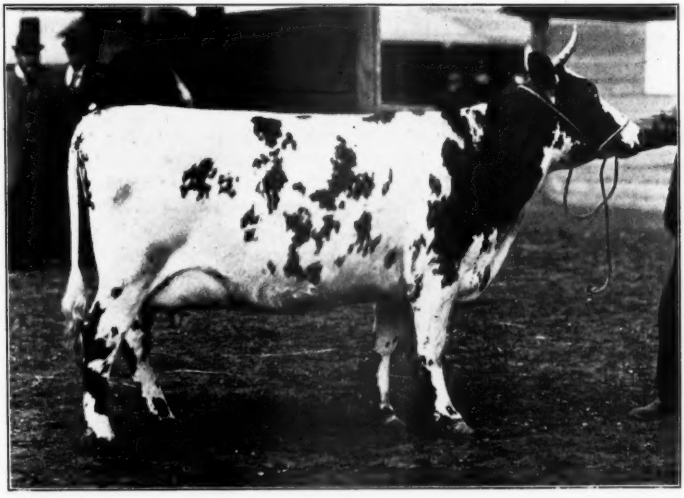
It will be noticed that, to begin with, improvement is the result of food, therefore, we say in our attempts for improvement feed is greater than breed. As soon as we begin to feed for improvement in the direction of milk or beef a change is noticed in the external form of the animals, which nature provides for the better attainment of the objects sought after. So far we have referred almost entirely to the question of the influence of food which could not possibly produce such models of symmetry and form without the skill and guidance of the breeder.

On page 166 of OUTING for May is an animal that, as nearly as I am able to judge from the oldest cuts of cattle, represents the original cow, at least so far back as we have records of her appearance, as may be seen in the British and other museums. It is to or towards this degenerate form that so many animals in America revert, even while the improved milking qualities are sometimes retained. Such marks of degeneration in a herd which, when first imported, were the best money could buy, shows that the owner is anything but a successful breeder. We have been carried completely away, many of us, in our attempts to produce milk and butter records. We have selected sons of some famous record-breaker of a cow that has gone back twenty-five or fifty generations along the line of her improved form and satisfied ourselves we were sagacious in our selection, whereas we have been producing nothing but weeds and rubbish. We have been led astray by mere records of pounds and ounces, and lost sight entirely of the more valuable qualities, namely, perfection in form. Some American gentlemen farmers have said to the writer "I keep cows for milk, feed them to produce milk; I do not care for the fancy points, the shape of the horns, the mere carriage of the head makes no difference to me, as long as the cow produces a fair quantity of good milk." Just so. These are the men who are helping to bring breeding in America into general disrepute, who never should have bought pure-bred stock to begin with. It has taken fifty or one hundred years or more to bring an animal up to its present high state of perfection, and it is too bad to see men take the same animals and breed them backwards with nothing to show at the end of a few years but a lot of ordinary to good dairy cows such as you can buy anywhere for about $50 per head. Such men lose sight of the art and skill entirely. It is like buying an oil painting and using it for a fly screen; it may keep out flies as well as a bit of mosquito netting, but it looks sadly out of place, to say the least. The trouble with these gentlemen is, they



AYRSHIRE COW "DEWDROP."

fail to understand what it was they bought when they paid $150 or $250 or $500 for a pure-bred cow, when they could have bought a native or grade that would give just as much milk or butter for $50. Let me tell what it is they bought with this extra $100, $200 or $400. It was the work of the artist who has devoted a lifetime to the art of breeding for improvement. His animals represent the highest possible development towards perfection that he has been able to attain, symmetry, color, markings, carriage, features, quality. These beautiful animals for which you paid high prices are descended from awkward, ungainly brutes. Those not far distant progenitors had ewe necks, hollow backs, slack loins, drooping rumps, and abnormally coarse heads. From ugly and misshapen carcasses a line of artistic breeders has fashioned,



AYRSHIRE COW "HOWIE'S CHAMPION."

through generations of effort, a most beautiful, graceful and symmetrical animal. He started with a wooden frame, so to speak, and a piece of canvas, and he has set before us, in much less than a hundred years, a perfect painting founded on a rough sketch handed down to him from his fathers. It is this that you paid the extra $100, $200 or $400 for. It was not money paid for fancy, it was paid for real merit.

The trouble is, such a utilitarian bought an oil painting when he should have been content with a chromo; he did not appreciate it and it deteriorated on his hands. In breeding, as in everything else, the stream is no higher than its source, you can start with the best in the world, but they will soon reach your level as a breeder.

I wish to call the reader's attention to the two illustrations. Dewdrop, a good dairy cow, a pure-bred Ayrshire such as can be bought in Scotland for about $100, and Howie Champion which is a pure-bred Ayrshire of the highest development, three or four times winner over Scotland. She is worth in Scotland about £200 or $1,000. As to milking qualities, Dewdrop is quite as good a cow as Howie Champion, but what a great gulf separates them! What would the purchaser get for his extra $900, if he should buy the Howie cow? You will notice that Dewdrop retains from her original ancestors, although slight in comparison to them, a drop in the neck just forward of the withers. It may take twenty-five years, or twelve generations, to produce a descendant from her with the more perfect carriage, or setting on of the neck to the shoulders noticeable in the Howie cow. The former is also plain and a bit rough about the hips, rumps and setting of the tail, which has also disappeared in the champion. Look at the shape of the udders of the two cows. That of Dewdrop is very good, but that of Howie Champion is perfect. I shall have occasion to revert to this subject in my next paper. Notice also the greater depth and spring of ribs in the latter cow, the carriage of the head and of the horn etc.

The production of these perfect specimens is the art of breeding, and that is what you buy and pay for with your extra $900. Such prices are asked and paid, not by so-called "fancy farmers" alone in England and Scotland, but by tenant farmers who are themselves breeders of the same kind of cattle and know the worth of a sire, for instance, that is producing animals of an improved type.

If you see no more in a cow than the dollars and cents she can produce for you at the pail, take my advice and let pure-bred high class animals alone. If you do go in for blooded stock which some one has worked carefully and patiently and thoughtfully over for the last twenty-five or fifty generations, go in for continuing on in improvement; it is nothing short of a sin to let them degenerate on your hands. On the contrary, if you succeed it will bring dollars to you where dairy qualities alone would only bring cents. And, better still, you will have acquired the highest distinction among your fellows that it is possible for an agriculturist to attain, namely, that you are a successful breeder.

Start slowly with a few good, all around cows like Dewdrop, for instance, and set your mark for perfection. If the tenant farmers of England and Scotland, and the peasant farmers of Jersey and Guernsey can succeed, why cannot our own intelligent agriculturists? If it is not beneath the dignity of His Majesty King Edward VII. and the majority of the titled and wealthy gentlemen of Great Britain to be personally engaged in the breeding of farm stock for improvement, why cannot, why should not our own cultivated gentlemen farmers who have the taste and means for rural life, devote themselves to this most gentlemanly and most artistic branch of agriculture?

LAWN-TENNIS IN CONTINENTAL EUROPE

By Clarence Hobart

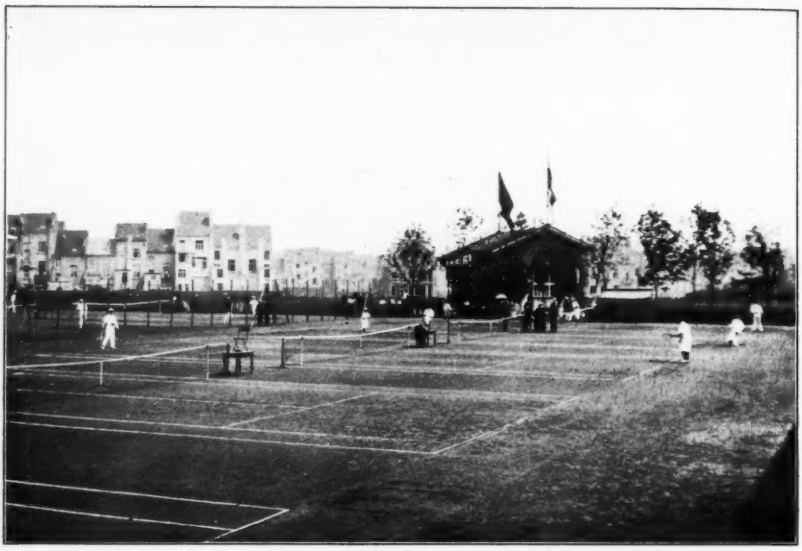
LAWN-TENNIS on Continental Europe is conducted on a much higher plane than most Americans imagine. Until I had been there and discovered my mistake, I had the fixed belief that the best continental players were extremely unskilful, and I pictured them disporting on indifferent courts, armed with inferior implements. To my surprise I found that the courts, which are always of earth, as the turf is not suitable, were on the average fully as good as the better class of similar courts in this country; that the fixtures and implements were of English make and superior to our own, and that there were quite a number of very fair players, with one at their head, Count Voss, whose game is distinctly first class, but who, unfortunately, lacks endurance, and is unable to do himself justice in a long match.

This state of affairs, most satisfactory considering the comparatively recent introduction of the game, is largely due to the influx of British players to the tournaments in ever-increasing numbers. The most important meeting held on the continent is that at Homburg v. d. Höhe, Germany. The Homburg Cup and the Championship of Germany, two separate events, are almost invariably won by crack British players, while the open championships of France, of Holland, of Belgium and of Switzerland have been frequently held by Englishmen. With the opportunity thus afforded for practice and observation, the native players have improved rapidly, and the best of them can now hold their own with Englishmen who have won honors at home.

My first experience of continental tennis was at the Homburg tournament of 1899, after a campaign of several months' duration on British courts. The international side of this meeting was most interesting in its novelty, for among the three hundred and sixty-two entries in the eleven events were representatives of Belgium, Austria, Holland, England, Ireland, France, Germany, and the United States. With such a diversity it was rather surprising to find that the English language was used almost exclusively in scoring and giving decisions. This is true all over Europe in regard to tennis, and I met a number of enthusiasts who had learned to speak English in order that they might be able to converse with English players. One language more or less, however, is nothing to Europeans, who usually speak four or five fluently.

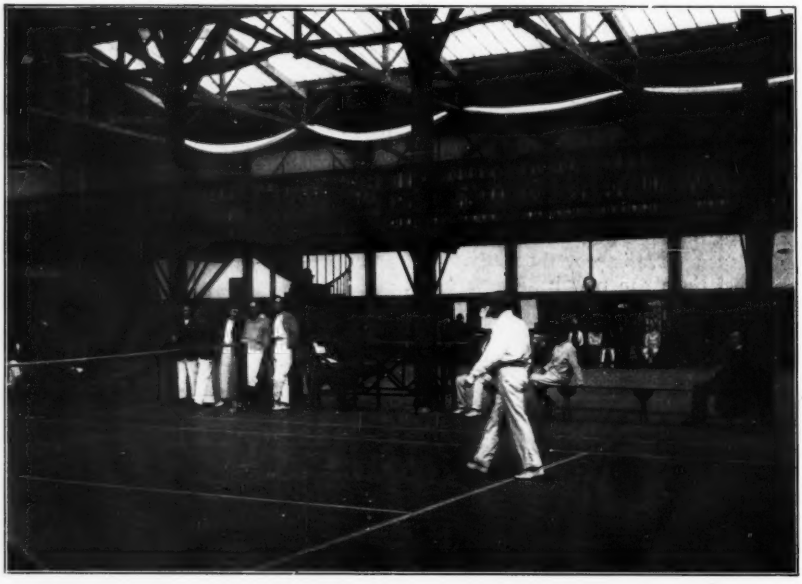
The courts, six in number (not to mention half a dozen or more practice courts), are as good as any we have, and the mistake is not made there, or elsewhere in Europe, so far as my experience goes, of not having ample space behind the base lines. The management of the tournament left nothing to be desired, in fact, I have never seen

COUNT VOSS.
Champion of Germany.



ON THE COURTS OF THE LEOPOLD CLUB, BRUSSELS.

better. It was conducted on English lines, which are stricter and more businesslike than American, due, no doubt, to the greater number of events and entries which the English tournament officials have to deal with. The handicap events were five in number, namely: men's singles (in two classes, with 58 entries and doubles (28



ON COVERED COURTS AT AUTEUIL, PARIS.

pairs); ladies' singles (17 entries) and doubles (10 pairs); and mixed doubles (25 pairs). The number of entries are given here to show the magnitude of the handicapper's duties. Considering the wide range of skill among the competitors, their number and their many nationalities, I doubt if there is any other tournament in the world which calls for so much labor and judgment on the part of the handicapper.

An interesting phase of the Homburg tournament is the part taken by royalty. In front of the first row of everyday spectators, at important matches, are placed red cushioned wicker armchairs, in which are seated Imperial and Royal Highnesses. These latter, and those of lesser rank, are never lacking at Homburg, where, in fact, the untitled individual seems to be almost the exception. A great feature is made here, and at all the other continental tournaments, even the smallest, of the presentation of prizes. Some one of the highest available rank is induced to preside. An assistant calls out in rotation the names of the successful competitors, who thereupon step forward amid applause and receive their prizes from the hands of the great personage. This ceremony is usually preceded or followed by a speech, after which the crowd disperses, feeling that the proper formalities have been observed.

At all continental tournaments well trained ball-boys are provided for every court. Those at Homburg are very picturesque in scarlet jackets. Each one wears a large figure on his sleeve corresponding to the number of the court to which he is attached. For every match six balls are given out, with the number of the court stamped on each ball. The boys are held responsible for these, and a failure after the match to turn in the full quota entails a reduction of their earnings. This causes them to show almost ludicrous energy in retrieving balls. In fact their efforts are frequently too violent, when, as often happens, they seem to develop the football instinct to follow the ball at all hazards. Their special delight seems to be in dashing in between points to recover a ball near the net, just as the server is making the preliminary motions before serving. As these ball-boys speak only German, the player who is not acquainted with that language is frequently in difficulties. I have seen an Englishman with fire in his eye, ready to explode with wrath, glaring at a boy but realizing his helplessness he boiled inwardly and held his peace. Everybody knew what he wished to say, and enjoyed the situation intensely. My own plan, which proved quite effective, was to procure the services of someone familiar with German before each match, and to call up the boys to receive a lecture through my interpreter, laying particular stress on the injunction not to invade the court, particularly the region near the net, except at the end of games.

To the American player the climate of western Europe will seem very much like that to which he is accustomed. It was a great relief to me to find this to be so, for in England, even on the hottest days of June and July, there had almost always seemed to be a latent chill in the air, and on cooler days I had more than once started in to play a match with my teeth actually chattering. While only fairly comfortable in heavy winter clothing I often marveled at Englishmen in light summer clothes, and at Englishwomen in the thinnest white frocks with gauzy sleeves, and have been asked under such circumstances "Isn't this a blazing hot day?" No wonder the English players find our summer weather enervating! I am convinced that no American will ever do himself full justice in England until he has been there long enough to become thoroughly acclimated; but in western and southern Europe there is no such difficulty to overcome.

In Berlin I played at the Berliner Spielplatz, where there are about eight fair courts; but it is unfortunate that a row of dazzling white houses should have been built opposite the grounds, as they make a very bad background for one side of every court. I also played at the Anglo-American club, which had two indifferent courts; but at that time a re-organization of the club was projected, having in view their improvement, and, I believe, the making of additional ones. There are said to be over a hundred courts in Berlin, and a rapidly increasing interest is being taken in the game.

While at Hamburg I was shown a large club, which had a number of what appeared to be very good courts. In Vienna I enjoyed exceedingly six or seven afternoons' play with Herr von Hertz-Hertenried, the best Austrian player, and one of the strongest on the continent. Von Hertz's game reminded me of Richard Stevens' although of course not as strong. His backhand is not nearly as good as the latter's, and is rather awkward,

but his forehand is similar, and he plays the same persistent, steady back-court game. He is not a young man, and will hardly improve his present form to any great extent, but his devotion to the game is admirable, and he is one of the keenest enthusiasts I have met anywhere. Our rendezvous was at one of the prettiest club grounds I have ever seen. Six courts, which, as always, are of earth, are set into lawns of turf. The grounds are laid out in a city park called the Prater, and are surrounded by fine old trees, which add greatly to the beauty of the scene, but, it must be confessed, do some injury to the light in the afternoon. For this practice-play there was always a club attendant to call the score, and, at the same time to manage a score-board, which is an improvement on those in which colored balls are used; being easily worked by slides pushed out from the middle. Another innovation was the use of butterfly nets by the ball-boys, who by this device were enabled to stop balls which otherwise they would have wasted time in chasing, stop nets thus being rendered unnecessary. The membership of this charming club is drawn from the aristocracy of Vienna, headed by the heir to the Austrian throne, Archduke Otto.

The three famous courts belonging to the Hotel Beau-Site, at Cannes, the home of winter lawn-tennis, beautifully situated in a garden of tropical palms, are almost perfect, their one drawback being that after a rain they become very sticky, and, owing to the composition of the soil, do not dry quickly. However, there is very little rain on the Riviera in the winter months, sunshine and, alas! wind, predominating. By way of illustrating the quality of entries at these tournaments there were at Cannes, at the time of my visit R. F. and H. L. Doherty, J. M. Flavelle, E. S. Wills and C. B. Weir, all English players—while from the other side of Nice, Count Voss and Countess Schulenburg came almost daily, the former in his magnificent great red-coated automobile. It is on account of this yearly winter practice with some of the best English players that these two Germans have so far outstripped all their compatriots. The Countess is a really excellent player, very sure and yet often brilliant. She is particularly good in doubles, in which, I should say, she is at least as strong as any woman player we have had in America. Her only rivals on the continent are one or two French ladies. Voss' strokes are beautiful, very powerful and clean cut, and for a set or two he is, when in form, a good match for almost any one.

I had the pleasure, at Cannes, of meeting Mr. John Simpson of London, a kindly old gentleman, who took the keenest interest in the tennis at the Beau-Site. He has wintered in Cannes for the last twenty years, and remembered all the Americans who have played there—Sears, Dwight, Beeckman, M. R. Wright, Miller, E. L. Hall, Campbell and others. Of them all, Beeckman's game impressed him most, and he recalled many close matches between Beeckman and Ernest Renshaw, the latter conceding the former half fifteen. Mr. Simpson took pleasure in arranging small impromptu tournaments for the Beau-Site players, presenting prizes, and himself adjusting handicaps very successfully.

One of the most constant wielders of the racket on the Beau-Site courts is the Grand Duchess of Mecklenburg-Schwerin. Almost every day she may be seen playing in mixed doubles with the best players, and her game is by no means weak. There are very few days during the season when the three courts are not in constant use, both morning and afternoon, and at the tournament which is arranged each winter by the guests of the hotel great interest and enthusiasm are shown.

The Cannes tournament, however, is quite overshadowed by the much larger and more important one at Nice. The entries there are drawn from all the Riviera towns, and the open events are for the championship of the South of France. The Nice club has four excellent courts, but only two are used for the tournament. For this event these two courts are enclosed on one side and both ends by a wall of canvas painted dark green and about twelve feet high, with a temporary grand stand erected on the remaining side. This arrangement gives an almost perfect background, and a very desirable wind shelter as well. It can be recommended to any one desiring perfect conditions. The tournament at which I was present was exceedingly well managed by an Anglo-American committee. A novel feature was the awarding of prizes to the three best umpires, decided by vote of the players, with the stipulation that only those who had officiated in at least ten

matches should be eligible. This clever plan for obtaining willing umpires succeeded admirably. Most of the contestants were English or American, with only a small continental representation. Of the latter, Monsieur Lemaire, of the home club, was the most prominent. He is a Belgian, and ranks second in his country. Coached by Burke, the professional, who is engaged by the Nice club for the winter season, he has developed considerable skill, and is one of the most promising young players on the continent. His form is good, evidently modeled on Burke's; he has command of every stroke, and his only marked weakness is an occasional tendency to wildness. In the singles handicap he defeated R. F. Doherty, the English champion, after a very close match, at owe thirty, receive five-sixths. These odds are, I estimate, equivalent to a shade over receive half thirty. One of the best Italian players, Count de Robiglio, was also a competitor, and showed excellent form, but I understood that his game was principally acquired in England.

Speaking of Burke, who is an Irishman, and who is said to have helped considerably in developing Dr. Pim's game to its high standard, leads to mention of the part that professionals take in European tennis. To them the rapid development of the continental players is to a considerable extent due. Imported from the other side of the English channel by clubs in France, Germany, Belgium, Sweden, Holland and other countries, they are useful, particularly, in instructing beginners and starting them on the right path. In few cases are they the equal in skill of the best English and American amateurs, Burke being a notable exception.

Of the merits of the two courts of the little club in Bordighera, on the Italian Riviera, I cannot speak from actual playing experience, but they looked distinctly good. I am unable to say as much for those at Monte Carlo, but since I saw them they have been made over for the tournament which was held there last winter, for which challenge cups of fabulous price were offered. Winter before last, unfortunately, this event, for the first time in several years, did not take place.

It is a pity that more of the continental players are not able to participate in this winter tennis season, and that English and a few American players are left in almost undisturbed possession, for the opportunity to meet better players is far greater here than anywhere else on the continent. It may be that by degrees the better continental players will appreciate this fact, and will undertake the journey to the south of France from their respective homes, in order to reap the benefits of a higher tennis education. Thus far they have not done so.

My continental experiences closed with a visit to the covered courts at Auteuil, in Paris, where the French championships are held. The Parisian player is wedded to indoor tennis, but it seems very strange that national championships should be played on boards. The two courts are very similar to those at the Queen's Club, London, and not unlike those in the Tennis Building in New York, but the entrance of daylight is better provided for than at the latter place. I had one set with Monsieur Aymé, the French champion, and found him a dangerous opponent on the wood floor. He plays a very swift and aggressive game, attacking always, and is extremely quick and agile. This is, I am told, characteristic of French players. Opposed to the Hollander, Benkuna, the contrast would be striking. Aymé is considered to be only second to Voss on the continent, and the French players as a class are rated ahead of the other nations. While this estimate is probably just, it must be remembered that the French are most at home on covered courts, and as they do not enter their neighbors' tournaments to any extent, what they could do out of doors is more or less problematical.

Omitting from consideration Count Voss, who is far ahead of the others, I should place the first five or six continental players, as a class, at receive fifteen and two-sixths, below the first class in America and England. For the benefit of the uninitiated, I would explain that this handicap means an allowance of thirty in two games, and fifteen in the other four of each group of six games.

Lawn-tennis is undoubtedly by far the most popular outdoor game on the continent. As yet golf, its rival elsewhere, is by no means formidable. Sometime in the future, no doubt, the latter will have its day, for golf, as every active lawn-tennis player firmly believes, is an excellent game—for all those unfortunate mortals who, for one reason or another, cannot play lawn-tennis.

THE NEW MEASUREMENT RULE IN YACHTING AND SOME OLD ONES

By C. H. Crane

FOR several years it has been evident to thinking yachtsmen that the existing measurement rule was fostering an undesirable type of racing yacht. In other words, that the successful vessels year after year were so from a direct evasion of the spirit of the rules. In measuring water-line length there is no doubt the framers of the rule expected to measure the actual length used by the racing yacht when in motion. That this is not at all so in the modern yacht is too well known to need comment. In fact we have, even in the daily press, long and learned articles showing how this or that new vessel is to gain fifteen to thirty per cent. in length so soon as she heels even to a moderate degree. This increase of length under sail has been brought about by the filling out of the water lines with an accompanying increase in the over-all length. The old argument that it is as fair for one as it is for another is not a good one in this case, for the modern boat with extremely full water lines, especially forward, is a bad sea boat, and one which the 1900 seventy-footers showed to be uncomfortable and, with light modern construction, dangerous even in a moderately heavy wind and sea. In addition to this excessive filling out of the water line plane there has been, or rather, had been up to '95 a gradual cutting away of the body of the boat, reducing the displacement as compared with the beam and draught. The fact that since '95 no further change in this direction has proved of advantage, is no argument in favor of the existing model with its unnecessarily great draught for every purpose except racing. I think, however, very few yachtsmen will question that the fulness of water line forward and aft is much the more serious evil of the two. The filling out and lengthening of the ends is really producing in each class a larger boat than the ones that have been previously built. The fact that this boat is larger naturally gives her more inside accommodation. I doubt very much whether any seventy-footer in existence has more inside room than the four Herreshoff boats of 1900, but with the same over-all length, and the same cost of construction, they could have had even more room without the dangerous addition of long, full ends.

In making the new rule no radical change has been contemplated. All boats are to be measured and classed just as they are to-day, with this exception, that wherever the ends are extremely full, for the purpose of evading the measured water-line length, they are to be taxed. A boat whose area of water-line plane is seventy per cent. of the inclosing parallelogram has been chosen as a normal, and all boats that have fuller water-lines than this are to be taxed. I cannot emphasize too strongly the fact that in making this rule no one of the various committees wished to revert to the old-fashioned hollow-bowed boat, and the rule gives no premium for such a boat. Although every boat with ends fuller than the normal is taxed, there is no advantage in going in the other direction, as no premium whatever is granted. Just as in the tax on fulness of water-line, a certain normal has been chosen, so in the relation between beam and draught and the displacement of the boat a good normal has been chosen, and all boats exceeding this are to be taxed.

It may be interesting at this time to consider some of the older measurement rules and the models which they developed.

Yacht racing is one of the youngest sports we have, dating back not more than sixty years (though we have recorded examples of races between sailing vessels at a much earlier date). Its history is well known, and at its beginning some measurement rule was found necessary.

It was evident almost from the start that, other things being equal, a larger vessel would beat a smaller, and that it was necessary to recognize this by some measure of size so that fair play, which is the *sine qua non* of sport, should be preserved, that vessels of the same size should race together, and that where a larger vessel raced a smaller she should give time allowance. The early

rules both here and in England took account of size in a very crude way, being rough measures of the cubic contents of the vessels measured, and they were taken directly from the existing tonnage laws for the admeasurement of merchant vessels. The early English rule, and the one under which the *America* won the Cup, was, length of keel less the beam, multiplied by the beam, and again by one-half the beam, this product divided by 94. In the old days this was a very fair measure of tonnage as the depth very nearly equaled half the breadth, and length, times breadth, times depth divided by 94, did equal the tonnage of the existing sailing vessels. This rule was evaded very soon by shortening the keel abnormally; and for length of keel was substituted length on the water line. The other parts of the rule remained unchanged.

Minor imperfections of this sort are neither vital nor interesting and had but slight effect on the development of the English models. The important fact was that in making the assumption that the depth equaled half the beam a double and most excessive tax was being imposed on beam.

It was due to this alone that the well-known English cutter type was developed. This rule, like many things that are bad in themselves, gave to the modern yacht one of its best features, outside lead ballast. Owing to the heavy tax on beam, English yacht designers of thirty years ago could not gain sail-carrying power from breadth as we did here, but were compelled to resort to deep ballast. This development was carried on between the years of 1871 and 1885. The *Cambria*, Mr. Ashbury's challenger, though somewhat narrower and deeper than most of our models, was certainly no more so than our old *America*. But from 1871 on, until the change of rule in 1885, year by year the successful boats were narrower, deeper and longer. We have indeed the record of many English cutters six and seven beams to their length and drawing more water than their beam.

Between 1853 and 1871 our rule was an area rule, that is length of keel multiplied by greatest beam, differing in effect from the English rule chiefly on account of the fact that beam was taxed once instead of twice. So far as I can learn this rule had very little effect on our models, partly due to the war, no doubt, and partly to the same cause that kept the English models so unchanged from the time just after the *America's* victory until the *Cambria* challenge in 1871; that is lack of keen and persistent racing.

In 1871 our rule was changed and though framed with the same intent as the old English rule did actually measure the cubic contents of racing vessels. In '71 this cubic contents was for the under water portion only (a true displacement rule where boats of larger displacement gave time to those of smaller, irrespective of the other dimensions.) This seems laughable to us now, when all are agreed that our modern rules should be changed so as to encourage displacement. This pure displacement rule was soon changed to one taking the cubic contents of the hull below the lowest point of freeboard, and this rule lasted till '82. Under it the wide, shoal boats flourished. *Phantom*, *Vision*, *Fannie*, etc., names to conjure with in their day. Practice soon showed that a wide shoal boat of the same cubic contents as a narrower, deeper one could carry much more sail without offering proportionally greater resistance and so go much faster. Owing to the sail-carrying power of our shoal sloops, the lowering of ballast was not a necessity, so the value of outside lead was not appreciated.

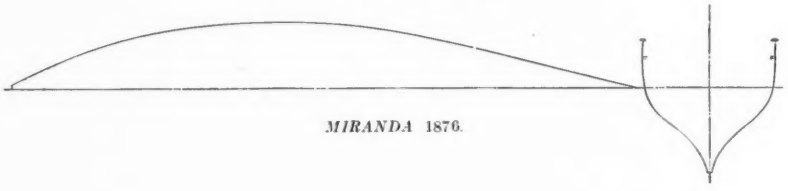
In the early eighties the differences of model here and abroad, brought about almost entirely by the differences in the rules, had become very clearly defined. Our boats broad and shallow centerboards with inside ballast, the English narrow and deep with heavy outside lead keels. The modelling was almost entirely of the rule of thumb variety, and the development of the type brought about by the rules was gradual, and made by short changes year by year; the Englishman could see no speed in anything but a narrow boat, forgetting that his narrow beam was caused by his rule and not by any greater speed giving advantages pertaining thereto. The American believed that nothing on earth could equal his shoal draft centerboard boat. Fortunately for us we were shown the advantages of outside lead ballast before the advent of the *Genesta* in '85.

Our cubical contents rule was changed in '82 to one which took account of the water-line length, as it had become very evident that water-line length was one of

LIVONIA 1871.

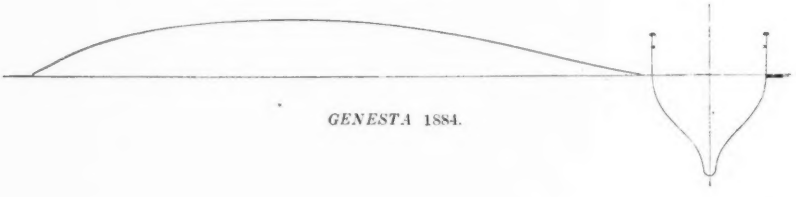
GRACIE 1872.

SCHOONER YACHT *PALMER*.



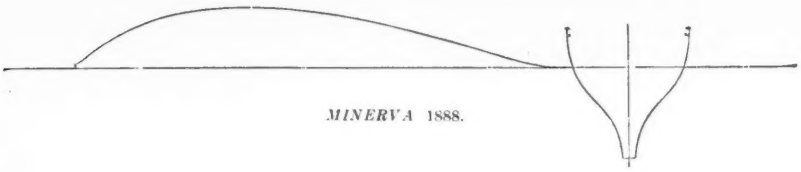
MIRANDA 1876.

CLARA 1882.



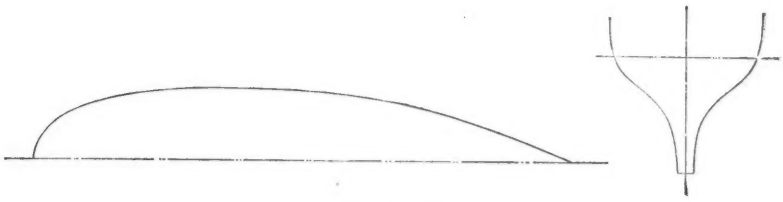
GENESTA 1884.

PURITAN 1885.

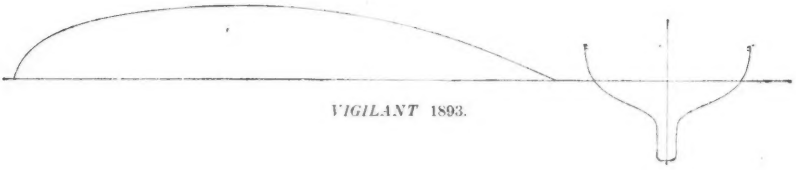


MINERVA 1888.

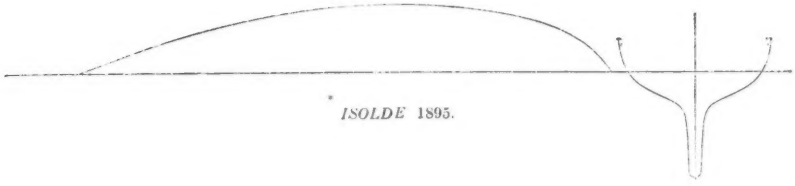
SEA FOX 1888.



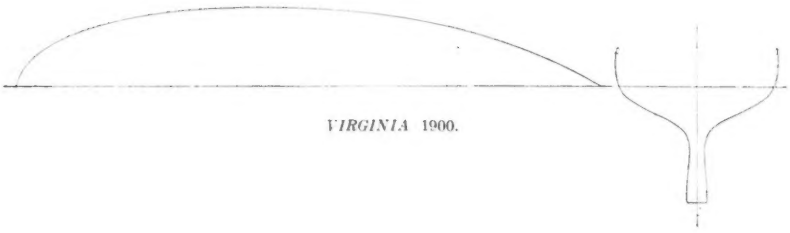
GLORIANA 1891.



VIGILANT 1893.



ISOLDE 1895.



VIRGINIA 1900.

the most vital factors in a boat's speed. It must be remembered that at this time a sudden change of rule, however radical, did not bring about, and of necessity could not bring about an immediate and radical change of model. It was more a reclassification of existing boats than a complete change in the new ones, so that we had practically the same type of boat racing immediately after the change of rule as we did before. It was at this time (1881) that the English cutter *Madge* came to our shores; she was absolutely different from anything that had ever been seen before in this country, and the admirers of the shoal draught sloops laughed her to scorn. In spite of their laughter she won nearly every race she started in, and gave our yachtsmen a good deal to think about. After the advent of the *Madge* in '81 and the *Clara* the year following, a large school of American yachtsmen were so much impressed with the virtues of the English cutter that they could see nothing else, and, like all ardent disciples, they were as strong in their advocacy of the bad features of this type as of the good. The *Mohawk* disaster emphasized the necessity of noncapsizable vessels especially in the larger classes.

In '85 another challenge came for the *America's* Cup, and fortunately for us Edward Burgess was on hand to design the defender. He had thoroughly learned the lesson of the great value of outside lead ballast taught us by the *Madge* and the *Clara*; he was, however, untrammeled by long tradition in favor of extremely narrow beam, so that his production, the compromise sloop *Puritan*, although fitted with a centerboard was in reality a combination of the best points of the American and English types.

It is very important to emphasize here the fact that the relative speed of two boats is very largely determined by the rule under which they race. Had the *Puritan* and *Genesta* raced under the English rule it would have been quite impossible for our boat to have given all the required time allowance and still have won. It is very hard for even expert yachtsmen to impress their minds with this fact. A boat that wins races is called fast and one that loses slow, so that it is not difficult to realize that the English models for some years after the change of rule were still much narrower than they should have been. Bearing this in mind, it seems most reasonable to attribute our success in the international races of '85, '86 and '87 to the fact that our measurement rule had fostered a wide boat. It is pretty generally admitted that if we had not learned our lesson from the *Madge* and *Clara* we should have lost the Cup at this time. Curiously enough, the English and American rules in '85, though differently expressed, were practically the same in principle—that is a combination of water-line length and sail area, with this one difference, that the English rule imposed a much heavier tax on a large spread of canvas. We had, however, no latent prejudice against beam to overcome, and though at this time and afterward there was a great hurrah made over the victory of the centerboard over keel, the victory in each case was really that of the more powerful boat over one with less power.

Until '86 neither side knew anything about the value of light construction, but the step from the outside lead keel, to lightness of construction and rig is so logical, that it is not surprising the step was soon taken. The heavy lead keel gave stability through the lowering of the center of gravity. It is clear that every ounce of weight taken from construction and especially from rig and added to the lead keel lowered the center of gravity and increased the power without in any way altering the boat's form. From '87 to the present day the development of model under the length and sail area rule, has been in two directions, a gradual lightening of displacement as compared to the beam and draft, and the filling out of the water-line plane both forward and aft. It was very soon found that the increase of power by lowering the center of gravity beyond a certain point was of no use, for there was a limit to the sail plan that a boat of a given length could carry to advantage; from this point, as increasing knowledge enabled the designers to build lighter and lighter boats, and as they already had more than sufficient ballast to carry the best-sized sail plan, lighter displacement was a natural recourse. To lighten displacement and leave the ballast in the same place naturally interposed a deeper and deeper keel between the lead and hull proper.

It was in '85 that scientific designing

first came into vogue. I do not mean to say that before this time all vessels were designed by carving a model from a block of wood, or that after this all the scientific study which marks a modern Herreshoff creation was employed in the design of every racing vessel; but after *Puritan* the various elements of speed were much more generally understood, and the newer boats with increasing regularity beat their older sisters. The various developments toward the existing models of to-day were gradual, logical and usually inter-dependent. As the keel was deepened for the purpose of increasing stability owing to the lower position of the ballast, it was very soon apparent that there was more lateral plane than was needed to prevent leeway. Lateral plane meant surface, and surface meant resistance, so that the cutting away of the lateral plane forward and aft was a logical sequence to the deepening of the lead.

The wonderful success of the forty-foot cutter *Minerva* is still fresh in the minds of all yachtsmen, and she was the longest step in advance between *Puritan* and the revolutionary *Gloriana*. In the latter we have practically all the elements of a modern boat, though of course to a modified extent. From the time of the *Gloriana* it was clear that the old rule had ceased to be a true measure of a boat's speed. The measured water-line length was no longer the length on which the vessel sailed when heeled to even a slight degree, and from that day to this there has been a gradual filling out of the water-lines and a consequent lengthening of overhangs for the sole purpose of producing a boat which the rules did not measure.

A study of the accompanying plates showing the gradual change in shape of water-line and outline of midship section cannot fail to be interesting and will do more to show the direction of development than a whole book of description.

PRACTICAL MOUNTAIN CLIMBING

By Annie S. Peck

(Official Delegate of the United States to the International Congress of Alpinists, 1900)

MANY persons suppose that people climb mountains solely to enjoy the view from the summit, and that if this may be attained by rail or horseback it is so much the better. This view, however, is erroneous. To the mountain climber every moment is a pleasure, from the time when he sets forth for the little mountain hut, until the hour of his return, triumphant and happy, even though weary and footsore. The view from the summit, while doubtless appreciated by the majority of climbers, is not the main attraction. The chief joy is the varied and perfect exercise, in the midst of noble scenery and exhilarating atmosphere, for the attainment of an object, the conquest of the mountain. The peak utters a challenge. The climber responds by saying to himself. I can and I will conquer it. He would do it just the same if there were no one else in the world to whom he could recount the tale, though doubtless there are those who climb a lofty peak merely for the sake of saying they have been there. Such a person was once overheard to remark—"I had to go to Grindelwald to ascend the Eiger; it was a beastly nuisance, but I wanted to finish off the Oberland; I shall never go there again!" On the contrary, the real mountain lover having made his first ascent of some lofty peak is often almost as eager to repeat the climb. Thus Mummery stood seven times upon the summit of the Matterhorn, having made his way thither by four different routes; while my own feeling a day or two after my ascent was that I would gladly repeat it the next week if gratitude would recompense my guides as satisfactorily as fifty dollars.

The difficulties and dangers of mountaineering are greatly over-estimated by those who have no practical acquaintance with this form of athletics. As a matter of fact, if one attempts nothing beyond one's powers and exercises reasonable caution the risk is hardly greater in Alpine climbing than in bicycling or horseback riding. It

was my own opinion before beginning to ride a wheel, that the bicycle was more dangerous than the Matterhorn, and when I broke my knee-pan while learning I felt quite sure of it. At least three-fourths of the accidents that occur in mountaineering are the results of foolhardiness. More than half of the entire number happen to persons climbing without guides, some to climbers at-

MISS ANNIE PECK,
Equipped for Mountain Climbing.

tempting a dangerous or impossible route with guides, and there are still other forms of folly. One may carelessly engage an incompetent guide or an overbold one, who will undertake an ascent under unfavorable conditions. Eliminating these contingencies, there remain certain risks which must be taken by every climber who ascends difficult mountains.

However favorable the conditions and fine the weather, there is the possibility that a sudden storm may render the descent perilous, though even then the chances are ten to one that a skilful climber with first-class guides will return in safety. Furthermore, on certain mountains there are places where a party is exposed to danger from avalanches or falling stones. The risk may often be avoided or reduced to the minimum by waiting for the best of weather or by making a very early start. In some cases all risk cannot be eliminated. Thus on the Matterhorn falling stones are a danger that cannot be guarded against; but as in thirty-five years only one death from them has occurred, many persons take this slight chance willingly. Those averse to so doing may still find mountains where the best of exercise and magnificent scenery may be enjoyed in greater safety. On little mountains like those of our Appalachian range and on the lower Alps there is no question of real danger, except through one's own carelessness or over-estimating one's own powers. It must, however, be understood as a pre-requisite to safety that a person is competent for the task undertaken, whether that task be small or great. How shall that be known? Simply by working up gradually from small beginnings. Obviously a college athlete, and one with wholly untrained muscles, need not begin at the same place; but even for the former it is wiser not to try the most difficult mountains first, as great strength is not necessarily accompanied by a sure foot, or a steady head in high places.

There is, I believe, but one absolutely essential pre-requisite to a fairly good mountain climber, *viz.*, a sound heart. All other necessary qualifications may be acquired by a person of determination, but as grit and determination are lacking in many, perhaps these also should be counted among the essentials. Strong lungs are needful for high climbing, but no better way of strengthening weak lungs can be found than by careful practice in walking up-hill while inhaling pure mountain air. A perfectly steady head is a *sine qua non* on some mountains, while other hights, such as Mont Blanc, may be surmounted without it. Most persons, too, may by resolution and practice overcome a tendency to giddiness, so that the loftiest precipice will excite no thrill of fear; but until that stage is reached, one should avoid dangerous places, especially when unattended. Good nerves, either natural or acquired,

are implied in the qualities already mentioned.

A sure foot and an agile frame are desirable, but these, also, may be gained by practice. Naturally it is an advantage not to be very stout; one might almost say, the thinner the better, for it is easier to acquire muscle than to reduce flesh. Strong determination, patience, and perseverance are needful to enable a fleshy person to persist through the earlier stages of perspiration and exhaustion but there is no surer or more healthful remedy for obesity than mountain climbing, and it is the testimony of many that no physician's prescription will so surely restore the health and buoyancy of youth, the sensation of being ten or twenty years younger, as a summer spent in climbing high mountains. While six weeks of training might be needful to enable a stout middle-aged man or woman with flabby muscles comfortably to climb Mt. Washington, an athletic young woman accustomed to tennis and bicycling might be prepared in much shorter time to ascend the loftiest Alps; and each might feel the same glow of triumph in gaining a victory.

Too much stress cannot be laid upon small beginnings and gradual development of muscles. Commence with a walk of one, two or three miles, according to your ability; if overfatigued, rest a day or two, then repeat the walk. When you have done this easily, increase the distance, perhaps double it; again, if necessary, rest a day or two, and repeat until the walk is comfortably accomplished. Several important rules should be heeded in climbing. First, do not start out too rapidly. On the other hand, do not dawdle. If the beginning of the way is but slightly inclined, go faster there than later. It is a mistake to stop too often. If the grade is steep, or you are stout so that you get out of breath quickly, go a little more slowly. Even then a beginner will need to pause occasionally, but if so, do not sit down each time. Stand still a moment, and when your breath is normal, go on again. A sitting halt should not be made until one has walked at least an hour, and then five minutes should suffice. Until one can do this, it is wiser not to attempt even a small mountain. If after an hour's walk a long halt is needed, it is well to retrace one's steps. In all mountaineering an early start is desirable. Early, of course, is comparative. In the Alps it may mean one or three a.m., in the White Mountains six or eight, according to the work in prospect. Always allow a longer time for a walk than you think you will need. Waste no time in the early part of the day. While it is cool and you feel fresh, do all that you can. Do not hurry, but go on; make progress. Do not stop long even to admire the scenery. Learn while walking to observe that, unless the path is dangerous so as to require constant attention. When you have reached the summit, stay as long as you like, if you have ample time, and the descent is not difficult and dangerous. With due regard for these "ifs," pause whenever you please on the way down, but on the way up no more than is necessary. Why? Because, apart from the desirability of getting the hardest portion of the work done in good season, and before the long rest, nothing is more uncertain than mountain weather. If you reach the summit surely you desire a good view. That obtained, it matters less if fogs envelop you on the way down. Some people never comprehend this. They dawdle and gush over the first bit of fine scenery, regardless of the fact that grander is to come, and that delays are dangerous.

For Alpine climbing one must be competent to walk four or five hours, and, in emergencies, six or eight, without a long halt. Indeed, I once sat down barely half an hour altogether in a seventeen hours' climb; though many guides will stop when practicable every two or three hours for rest and refreshment, the rule "Eat little and often" being a wise one to follow on a difficult climb. The smaller mountains, like Pilatus, the Faulhorn and the Gorner Grat, which may be done without guides, will put one's muscles in order for high climbing. Next one of the easier peaks may be attempted with guides. The most important rule for alpinists is that guides should always be employed where it is customary. They should be selected with care and implicitly obeyed. Badeker's advice as to where guides are needful may be safely followed. Only after years of experience with the best guides should they be dispensed with, and by most climbers not even then. In choosing guides, assistance should be obtained from the hotel proprietors or from climbers of large experience. An ordinary guide may do for the easier mountains, but

only the most experienced and cautious should be employed for difficult climbs. A good guide will give advice as to all matters including outfit, which may be better and more cheaply procured in one of the Alpine centers like Zermatt or Grindelwald, save perhaps ladies' shoes and knickerbockers. Among the Alps, if one has a slender foot, it is difficult to get shoes to fit even when made to order. Two guides should be employed for one or for two persons, except on very easy mountains. On the snow there should always be at least three persons on the same rope; four may be equally safe, but on difficult mountains, unless both climbers are experts, it is better to have two guides for each person. On a mountain like the Matterhorn the danger is more than doubled with each additional person. Steep grassy slopes should be strictly avoided by amateurs. They are regarded as more dangerous than ice, and many fatal accidents have occurred through people ignorantly venturing upon them to pick flowers, who would never think of climbing a mountain, even with first class guides.

As to suitable costume, obviously it should admit of the greatest freedom of action, should be light, and for high climbing warm. Woollen underwear throughout is indispensable in the Alps, and desirable for most people on small mountains, though there it may be of the lightest weight, and some persons dispense with it altogether. The stockings, however, should in any case be soft and all wool. Some ladies declare that they cannot wear woollen next to the skin. A silk stocking under the woollen will be found convenient in that case; but cotton, light or heavy, is out of the question for real mountaineering, and undesirable for long tramps. One's feet at best are liable to become inflamed and blister, and it is the unanimous verdict of experienced mountaineers that woollen is the proper thing. As to boots, if you will not wear heavy soles, you may as well decide at once not to do any rough walking. What may answer on a smooth city sidewalk is entirely out of place on a rough country road, still more on a stony path, or on ice or snow. A sole with an intermediate layer of cork is lighter and easier than if all of leather. It should project a little beyond the uppers, which must also be heavy. For snow climbing the soles should be three-quarters of an inch thick, and the uppers should have at least two thicknesses of leather; elsewhere a half-inch sole will answer. Common sense toes and low broad heels are, of course, indispensable. The shoes should be laced, rather than buttoned, as the feet often become swollen, and the lacings must be adjusted accordingly. Care should be taken that the shoes, though not too large, be of sufficient size to allow of the heavier stockings; in snow climbing, perhaps, two pairs; and especially that they be a size or two longer than usual to avoid discomfort in going down hill. Hobnails scattered over the soles render the footing more secure, and in the Alps iron clamps around the edge are added. Among the most difficult Dolomites, special shoes with canvas uppers and rope soles are worn on cliffs where the footholds leave something to be desired, as the rope soles cling better than the nailed shoes. A soft felt or cloth hat with a moderately wide brim, which may be turned up or down, is commonly worn, though some men prefer double-faced helmets. A neutral tint, like gray or sage green, is the best. A narrow ribbon is useful to hold down the hat, in case of high winds in exposed places. I have, also, a black woollen hood, completely enveloping my head and face, for use in extremely cold weather. I have needed it only once, but then, without it, my ears and face would have been frozen.

So far my directions are applicable alike to men and women. As to other garments, men, we all know, climb in knickerbockers. Ordinary trousers are too cumbersome. Women, on the contrary, will declare that a skirt is no hindrance to their locomotion. This is obviously absurd, and though a few ladies have climbed mountains like the Matterhorn in extremely scant and abbreviated skirts, I dare assert that suitably made knickerbockers (not so scant as men's and yet not too full) are not only more comfortable but more becoming, whether to stout or slender figures. A scant skirt barely reaching the knee and showing the knickerbockers below, such as some ladies have worn, is as ungraceful a costume as could be devised; and for a woman in difficult mountaineering to waste her strength and endanger her life with a skirt is foolish in the extreme. For high climbing many ladies wear a skirt of moderate length until out of sight of the hotel or beyond the path of ordinary tourists, then they leave the skirt under a rock or in the mountain hut until their return. If the

descent is by another route, the guide without a murmur adds it to his well-filled rück sack. In snow climbing leggings should always be worn. Among our own little mountains it is customary to wear a short skirt, perhaps to the tops of the boots. If ladies were independent enough to adopt the plan, as some few have done, of leaving the skirt under a rock, they would generally be seen only by members of their own party and they would be able to take longer and more difficult walks, or to do the same with far greater ease. Of course in any case knickerbockers should be worn underneath. As to material there is great diversity of opinion and practice. Much depends upon the weather and the sort of climbing to be done. A waterproof cloth that will not catch or tear is desirable. Bed-ticking, duck canvas, and woolen of various sorts are used. In the White Mountains I have found a short skirt of coarse heavy linen light and comfortable. It weighs but two pounds and on a short walk is hardly noticeable; but when making my long trip over the Presidential Range, I did not wish even this slight impediment, and so carried my skirt which I put on just before entering the hotel at the Summit and at the Crawford House. The shirt waist may be of cotton or woolen, according to one's temperament and the clothing worn underneath; but in either case, a light wrap for the halts is generally necessary. In high climbing a sweater and other warm clothing are needful.

It may not be necessary to add that no one should climb mountains or even hills in corsets. One must have the full use of the lungs, and the loosest corset is some impediment to the breathing. As ordinarily worn they are impossible. Moreover, they greatly increase the heat, impede circulation, and promote rush of blood to the head. If walking on or near snow, one must positively wear smoked glasses, or suffer much pain and snow-blindness. Goggles of blue glass with wire netting around them, fastened by an elastic round the back of the head are common, but uncomfortable. Real spectacles of curving smoked glass are pleasanter though if not carefully made, they may magnify and injure the eyesight. In high climbing, a veil is not despised even by some members of the sterner sex. A blue one is additional protection to the eyes, but white is said to be better for the complexion. If, in addition to the veil, or even without it, one smears the face well with cold cream and adds a thick coating of powder, one may spend the entire day on the snow with impunity. One day last summer, I met a young man who had ignorantly neglected these precautions, whose face was a complete mass of blisters, the effect of being on the snow fourteen hours the day previous. His more prudent companion had wholly escaped injury. Among our own little mountains, such precautions are unnecessary, but if one has a very sensitive skin, or prefers to avoid the fashionable coating of tan, a use of the articles mentioned will secure the desired purpose.

There is a difference of opinion among Appalachians, with a majority in the negative, as to the desirability of carrying a staff on our mountains. In the Alps it is not so. On difficult mountains the ice-axe is a necessity, while on easier ones and on passes an alpenstock is generally carried, a light staff about the hight of the traveler or taller. Personally, I always carry my alpenstock on easy mountain walks. Being of bamboo it is very light, and I find it especially serviceable in going down hill. It will often save from falling one who has stubbed his toe or caught his heel in a root, and furthermore it takes the weight from the knees and feet. To those who, like myself, find going down hill, especially over a rough stony path, more trying than going up, a slight relief to the feet is grateful. The staff should be carried in either hand and frequently changed, and not be set down too far ahead in going either up or down, as it gives more support when moved often. It is very important when climbing to stand erect, not to lean forward on the staff however steep the incline. Lift the feet when climbing, but do not bend over.

A few words in regard to carrying bundles may not be out of place, as on small mountains a lady sometimes prefers or is obliged to carry her own wrap or luncheon. In high climbing the guides will carry everything. For a heavy burden, the best method is that of the Swiss guides, a rück sack or bag, well up on the back, supported by straps over both shoulders. A light bundle may be carried by a single strap over one shoulder and occasionally shifted. To me this is excessively uncomfortable. In fact, I never carry anything if I can avoid it. If a small parcel is indispensable, ladies will find it easiest to attach it to a strap around the waist, shifting

it from front to rear, and from one hip to the other. It is not very graceful, but when going up hill, one feels the weight less in front than elsewhere.

As to food, anything may be taken which is good anywhere, eggs, sandwiches, etc. Chocolate is a great stand-by among mountaineers, because both handy and nourishing. The kind which is made with pepsin and therefore more easily digested appeals to many. Beef tea or bouillon capsules are convenient where water can be heated. On high mountains coffee or tea is usually carried, tea being the favorite for long expeditions. At the International Congress of Alpinism last summer a resolution was passed deprecating the use of alcohol, especially absinthe, in mountaineering, but I fancy it was not designed to condemn the use of wine, as I have never known of a guide or climber among the Alps, of whatever nationality, who in high climbing did not carry some of that beverage, though on our own little mountains it is neither necessary nor desirable. In the Alps, however, it is often impossible to find water on the way, and the mild stimulant of ordinary red wine mixed with tea, coffee, or water is helpful and gratifying. Usually, also, a flask of cognac is carried, and this I recommend to persons who do not drink it, since it should be used only in case of emergency. I have carried a small bottle a whole summer without using a drop, but on the two occasions when I did not have it, it would have been desirable. Probably a draught of cognac last summer would have saved the life of Mr. Ormsbee at the critical moment when he sank down exhausted, ten minutes below the summit of Washington. And in case of storm a stimulant may be one's salvation, while if used unnecessarily or prematurely it may be a means of destruction. Ordinarily the best use for cognac is to bathe feet and knees both before and after a long climb, to harden and strengthen them; but doubtless alcohol would do as well. I have always drunk with impunity all the water I desired, though that is never a large quantity. Naturally, if overheated, one must use ice cold water sparingly. One should be careful to eat enough to keep up the strength, else one's nervous energy is liable to become exhausted. In case one is compelled to overtax the system, either from having attempted too much or unforeseen, circumstances having arisen, complete rest should be taken for a day, or a week, or until fully restored. If a day or two after serious over-exertion, one goes on traveling or climbing, one is liable to permanent injury.

If one avoids over-exertion, I believe there is no form of athletics so healthful as mountain climbing. Some physicians possess excessive caution. One lady whose physician told her she must never walk when she could ride or stand when she could sit (he might as well have added, nor sit when she could lie down), nevertheless developed into a climber who could take longer walks than the average. One had only to look at the members of the Congress of Alpinism last summer to perceive the benefits of mountain air and exercise. There was the president, M. Caron, in looks and manner barely forty-five, in reality above sixty; Mr. C. E. Matthews, ex-president of the English Alpine Club, of equal age, who in forty-five years has missed climbing in the Alps but three summers, still agile and youthful, his climbing days not yet over. Many ladies, English, German, even French (like Mme. Caron, a typical Parisienne, who would have never been suspected of such an act) climb high mountains with their husbands, and many, who have none, without; while many more tramp over easy passes and small mountains, enjoying magnificent scenery and gaining health and strength without a particle of danger.

In conclusion, let me say that of all the sports with which I am acquainted, mountain climbing, especially above eight thousand feet, is infinitely the most delightful; and I venture the prophecy that even the most indolent, if by any means such an one might be persuaded to begin and to persevere for a whole season, would find health and pleasure in this pastime.

EVOLUTION OF SPORT WITH THE GUN

By Wirt Gerrare

THE story of most beginnings is an appeal to the imagination, and that of sport is no exception to the rule, although it commences at a relatively late period in history. Sport as now understood was unknown to the ancients; it may have been perceived, but certainly was not generally recognized by those who lived in the dark ages now termed mediæval. The sporting instinct itself is quite modern, since sport dates only from the time when man first gave "law" to the game he pursued. In fact it did not originate; it is the joint product of barbarism and civilization, a blend mellowed by purifying conditions, themselves the outgrowth of ages.

The feudal lords lived for war and all that pertained to it. Falconry was their favorite diversion, and venery was regarded as the only suitable occupation for a noble in times of peace. The sports of the field were made to resemble as nearly as possible the combats of the arena. A Spanish print of the seventeenth century shows an improvised ring into which the boars were driven. The spectators assembled, the ladies of quality in covered carriages were admitted to the enclosure, and the attendants had long-handled forks with blunt prongs to turn aside the escaping boars and direct them toward the knights. In Germany, the huntsmen drove the game toward a selected point, where the nobles and privileged retinue had assembled. Long nets, improvised fences and other means were used to direct the game. In Italy, the process was the same, and in France, if the method was less thorough than that followed in Germany, the courses at least were unequaled for splendor. To kill the animals brought to bay by their hounds, pulled down by their dogs, or driven up to them by the attendants, the sportsmen used any lethal weapon. As driving superseded coursing, the crossbow was preferred to the spear; shooting succeeded the close combat; to obtain first blood was accorded the honor, the actual killing being delegated to an underling. Now the sportsman shoots only, the attendant gillie sticks and grallochs the stag.

Firearms as weapons of war were known to civilized Europe in the twelfth century. They were detested by the knights, and denounced by the church as inimical to chivalry. They became the defense of the free towns and the weapons of the foot soldiers, the freebooters, and the poor burghers and traders who developed them. At the end of two centuries they were clumsy and inefficient, having neither the range nor the accuracy of the bow. But at the beginning of the fifteenth century two great improvements in their construction were wrought in Germany. One was the flintlock which obviated the necessity of maintaining fire for igniting the match on the gun. The other was the grooving of the barrel to give to the projectile greater accuracy. Then guns were used for sporting purposes just as crossbows were, and eventually superseded them. Notwithstanding the greater deadliness of firearms, Germany adhered to the method of driving game. Often the guns were loaded with two bullets to increase the chances of hitting; then three, four or five were loaded into the one barrel. In the latter half of the sixteenth century a dozen slugs was the common load, but in some parts of Germany, as Mecklenburg-Schwerin, the use of "hail-shot" was forbidden absolutely. More than a century later, when the use of the shot-gun was accepted, driving the game continued, and in a modified form survives to this day. In the year 1753 there was a royal "jagd" of this kind in Bohemia. It lasted twenty days and there were twenty-three shooters, including the Emperor of Austria and Her Imperial Highness the Princess Charlotte. The bag comprised 19 stags, 77 roe-deer, 10 wild boars, 18,723 hares, 9,499 pheasants, 19,545 partridges, 353 quail, 114 larks and 60 various, a total of 47,950 head, for 116,231 shots, or an average of two kills to each five shots fired.

As marksmanship improved and greater skill was attained in the art of driving, instead of forcing the game into a *cul de sac* with the guns at the bottom, it sufficed to let them go past the firing point, and if they escaped that, to let them go free. The

pace was increased, the nets became a mere line of flags, and the range was widened. No other changes have been deemed necessary, and this method of big game shooting is that which obtains in Germany to-day. A modification of it is the "surround" of Scandinavia and Russia, and the identical method is still followed by the native princes of India in tiger hunting.

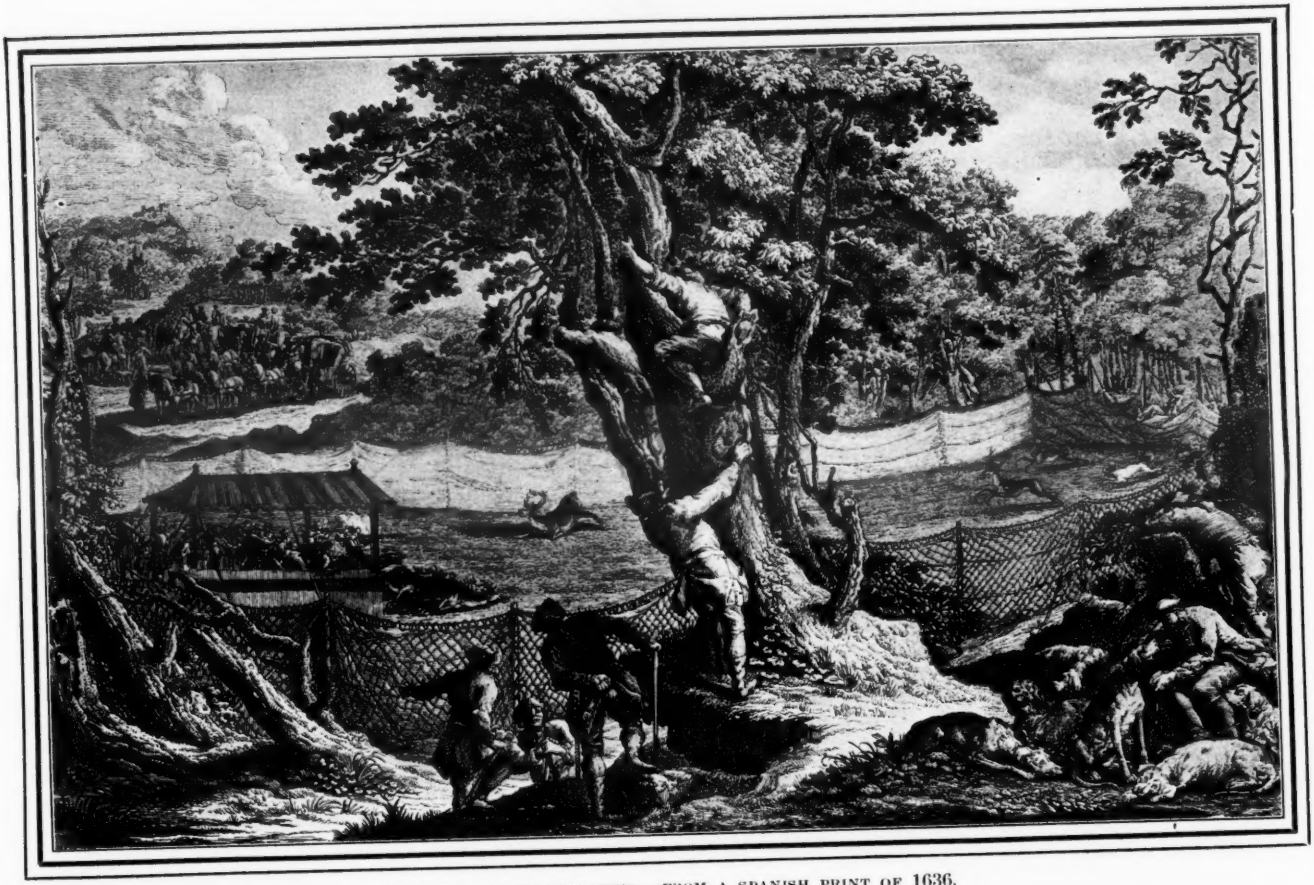
The sportsmen of France were slow to adopt the gun for sport. The Valois forbade the use of firearms because of public safety. Henry IV. sanctioned the use of guns in 1604, but in 1607 issued an edict forbidding their employment on crown lands. On the death of Louis XIII., in 1643, another attempt was made to legalize the use of guns for sport. His successor favored shooting, and was credited as being the best shot in France. It was during his reign that shooting over the setting dog became the fashion.

Whilst the legal use of guns was gradually spreading, the surreptitious employment of firearms for various unauthorized purposes was becoming general. Edict after edict was promulgated forbidding peasants and farmers to possess guns, but they failed to suppress the poacher and bandit. Indeed, to the lawless marauders the invention of the ordinary flintlock is said to be due. They could not purchase wheel-locks, and the common matchlocks, with their ever-glowing torches, showed too plainly the whereabouts of the unauthorized sportsman as well as startled the game; so they substituted an inferior mechanism and introduced a new type of gun. In the Spanish Netherlands, the users of the flintlock guns were termed "snaap-hans," probably because they shot birds which up to that time had been netted or snared. Guns were made smaller in caliber and lighter, and in Spain and Italy came into general use for bird shooting. In one of these countries, early in the seventeenth century, a new form of sport originated, that of shooting at birds on the wing.

The fowling gun of that period was of about fourteen gauge, the barrel nearly five feet long, the weight eight pounds or more. Quite a different weapon was used for shooting flying. This was of smaller caliber, the barrel about twenty-five inches long. It was loaded with about a drachm and half of powder and twelve lead pellets; the wadding of tow. The technical books of the seventeenth century contain full instructions for making powder and granulating it; to drop lead treated with arsenic into water, and to choose the right sort of stone for the "flint." By the middle of the century eight kinds of shots at flying birds were observed, and sportsmen instructed how to aim so as to score, whatever the direction of the flight.

In England, sport was resuscitated at the Restoration. Under the Tudors, manly exercises had been encouraged, but shooting with crossbows and guns was absolutely forbidden; minor sports were "unlawful games." Falconry practically died out with the Tudors. The Stuarts made a half-hearted attempt to introduce hunting in the courtly French manner, and later shooting with the shotgun became the recreation of gentlemen. Their methods were adopted from the Italians, and among the instructions given in the first English book on the subject is the advice to "shoot with the wind and not against it," which was copied by every sporting writer until the days of Peter Hawker. Again, "you must shoot rather sideways or behind the fowl than in their faces, and not at a single bird if you can compass more within your level; and if on a tree, or hedge, or on the ground, seek the convenientest shelter you can of hedge, bank, tree or the like, to be absconded from the fowls seeing you, which is very offensive to them." Having crept up within easy range of jugging partridges, the sportsman having a "fair mark" was exhorted to "lose no time but let her fly." The gun recommended is "something under a musket," loaded with a pipe-bowl of powder and a pipe bowl and a half of small shot, the spread of the shot has "the compass of a bushel measure," and the range is fixed at something under seventy paces. Shooting flying is described as "more commodious," and the best and surest way of getting game. To acquire the art the sportsman is told that "you should always have the gun cockt in readiness, with your thumb over the cock for the fear of its going off contrary to your intention, so that when you meet with any game you must be quick; and having got an aim to your mind, let fly with all expedition."

Thomas Fairfax, who wrote the "Complete Sportsman" (1689), says: "Some are of the opinion that you must shoot something before the bird, otherwise it will be



DRIVING DEER TO THE GUNS.—FROM A SPANISH PRINT OF 1636.

past before the shot can come to it, but this is a vulgar error. Yet I am of the opinion that if the game flyeth, as it were over your head, that it is best to aim at the head; and if it flyeth from you, to aim as it were under its belly; and it is found best to let the game fly a little past before you let her fly; for thereby the shot will better enter the body." Notwithstanding their inferior weapons, there is no doubt the sportsmen of the seventeenth century could shoot well. For instance, Le Bruyn mentions casually that he shot a crane on the wing with his rifle and a single ball. This was in 1702.

In the eighteenth century, the practice of shooting extended widely, but until the end of the period there was little improvement in the methods of hunting game. To get within range, they adopted all the arts of the fowler, and to find the game, used the "setting" dog the netters of partridges brought over from France.

Sportsmen practiced at swinging targets, but still used the heavy single gun. The difficulties encountered in acquiring the art of shooting flying were aggravated by hangfires, frequent and prolonged. The only thing to do, having pulled the trigger, and the powder in the pan having duly flashed, was to follow the bird, a method sure to produce a poking shot. In fact, until ignition became quicker, as it did when the percussion gun was invented, the poking shot, or holding on to the aim, seems to have been the only method which could possibly be practiced with success. It is quite possible that the slowness of ignition resulted in giving "law" to the birds. As it was practically impossible to shoot at very close range, shooters became accustomed to a "sporting" range, to which they adhered when faster guns made shooting at close quarters possible.

The game was found with setting dogs. If the birds lay close, they were flushed just when and how the shooter chose, and they dropped at about thirty yards from the gun. It was pretty, rather slow, but very enjoyable. It was in England with this method that the race of sporting shots originated—men who needed, and possessed, the faculty for correct observation and speedy action to which the old Spanish author called the attention of all who would be perfect wing shots.

By the early years of the last century guns were made lighter, faster and of better shape; sportsmen, also had the advantage of quicker and more certain ignition, and a second barrel in reserve. Then it was he took larger views than his forefathers; learned more, worked more assiduously, became self-reliant and complete master of the gun and of himself in the use of it. In sport, and particularly in shooting, he found himself; it gave a fresh zest to life and enhanced the enjoyment of other pleasures. Poets extolled the gun; it became not only a fashion, but a passion. Game laws were re-enacted, game preserving cultivated as though it had been an art, and a real love of sport begotten.

Amidst much that was artificial and affected there remained a genuine love of sport; a craving for open air, simple life and freedom from the trammels of the frivolous conventions of fashionable life in town. The sportsman did much towards the abolition of the wigs, powder and patches and fripperies of the Georgian period; and as the sportsmen increased, and were recognized, the continental fangles in dress and manner fell into disuse. The hatred of Napoleon and the "foreigner" had much to do with the change. Napoleon stopped the supply of guns, and in consequence more English-made guns were used. When the wars were over, the sport, the weapons and the methods of the successful nation were imitated by the continental nations from whom England had derived the crude, original forms of sport which English gentlemen had developed and perfected.

It is needless to enumerate the recent changes in the fashion of shooting, and impossible to compare the value of the marksmanship of those who used flint and steel guns with that of the well-equipped sportsmen of to-day. Both succeeded in obtaining the greatest pleasure from using the gun, but they used it in different ways. Colonel Peter Hawker not only fired at sitting fowl, but schemed for chances of doing so. He fired into the "brown" of a covey, and the more birds he could bag with one shot the better pleased he was. As late as 1835, he congratulated himself upon killing in one day four birds with one shot, and the acme of good shooting he considered the "cannon," *i.e.*, catching in line two birds as they cross each other's line of flight, and dropping both with a single shot.

It is counted the finest sport to-day, in England, when the birds are driven, fly fast

AN ANCIENT RUNWAY.—FROM A 16TH CENTURY PRINT.

within sporting range, and come in plenty. To arrange a successful drive is not an easy task, and it must be granted the shooting is difficult, but it is questionable whether the extra speed of the birds is more against the shooter to-day than the slowness of the gun was against the best shots of the old days. Formerly, a good day meant a walk of twenty miles or more; now it is twenty or thirty minutes of hard continuous firing two or three times repeated, and hours of riding, resting and waiting in between. Each shooter has a screen for himself and his two loaders; there he usually sits with his three guns until the birds arrive. In a drive which lasted less than twenty-five minutes, one shooter dropped 190 grouse, or more than eight a minute; there were eight drives in the day, and this one shooter killed 728 birds. With such practice as wealthy sportsmen can now command, it would be surprising if they were not excellent shots. Some moors will give more than one bird to the acre each season, and the whole of the bag on a tract of many thousand acres is reserved to fewer than six guns. At partridges and pheasants there are even more chances, as there is practically no limit to the number which may be raised. English records show that there are shooters who have killed over a thousand birds in a day, and nearly twenty thousand in a single season. On the continent it is the same; on the estates of one proprietor over fifty thousand partridges have been shot in a season, and nearly three thousand in a day.

It must be remembered that the pleasure of shooting is a personal matter only, and each sportsman may decide for himself what sporting use he will make of his gun. The onlooker and the critic cannot judge of the amount, or the quality, of the emotion the sportsman feels upon achieving a successful shot. There are men who contend that there is less sport with the gun under modern conditions than was obtained in the older fashion, and that, instead of progressing, there is a reversal to the continental methods of a century ago. Others are content with things as they are, and would not go back to dogs and hunting if they could. Only one thing will force them—the scarcity of game, for it is only where game is plentiful that driving is pleasurable and successful.

THE BOAR AT BAY.—FROM AN OLD GERMAN PRINT.

MASCALONGE IN THE FLAMBEAU WATERS

By H. S. Canfield

AFTER a more or less extended experience in many waters, I believe the North Fork of the Flambeau River provides the best fishing in America; and I say this with due regard to the mountain streams and parti-colored trout of the Pacific Coast, the rivers of Maine, the dashing torrents of the Virginian, Kentucky and Tennessee mountains, and even to that magnificent network of waterways known as the "St. John system." The Flambeau contains three varieties of game fish worth steady pursuit—the mascalonge, the wall-eyed pike and the small-mouthed, red-eyed, genuine black bass; probably, in proportion to size, the most muscular and courageous fish that floats, and the individuals of each of these varieties are of the very best of its kind. The water is clear and fast and cold, broken here and there by rapids, up which the fish must fight their way; it runs through ideal bits of scenery; it stops in pools of a blackness and depth profound; it may be fished either from the bank or from a boat; it is wide enough to permit of trolling and casting; the summer climate above it is ideal, and its difficulties are such that the fisherman who lands his quarry has some reason to plume himself upon his wrist-strength, adroitness and patience. A pike of even twelve pounds, a mascalonge of thirty, or a black bass of four is apt to reward the rodman at any time of the day, and there is always the certainty that some of these fish will be taken. It is an exceedingly rare occurrence that angler and guide return from a morning's effort with nothing to show for it save tired limbs and a ruffled temper.

There is a part of the year comprised between July 15 and August 15 when the mascalonge strikes rarely, if at all. The fish is then semi-sick and in poor condition. It sheds its abnormally long teeth annually, as a buck sheds his horns, and in the deflowering time is as out of condition, out of appetite, and out of patience as is a baby similarly afflicted. Any "musky" taken in that period is low of flesh and its teeth may be pushed out with a thumbnail. Guides will tell the amateur that the fish does not strike in late July because of the "bloom" on the water. Nearly all of the Wisconsin lakes and forest rivers are liberally decked with lily pads and pond lilies. This "bloom," a yellowish powder on the surface, is pollen mostly. It does not, however, affect the mascalonge. That representative of incarnate hunger does not bite because he has little to bite with. Any man with his teeth out similarly lacks pugnacity, and he doesn't become normal until he has become used to a new set. "You get your grinders out," says Fergy, the Flambeau guide, "and any dark night a squaw can take a corncob and a lightning bug and run you into the lake and drown you." This is probably true.

In September and October the "musky" is at its best. As the leaves turn to a crimson and the nights are cold, it seems to gain in strength and ferocity. It will strike viciously even until the first thin ice forms along the edges of the streams, but after the middle of November it retires within itself and meditates upon past crimes. Certainly it has no good deeds to think about, for if ever there was a conscienceless, powerful, malicious, scaled buccaneer in the waters of earth, that buccaneer is the mascalonge, masque-á-longé, muskellunge, or mas-ki-no-je as the Ojibwas used to call it. Like the bluefish it will kill until its appetite is satisfied, then go on killing for the love of blood. It would be taken seldom if it quit when its maw was full, because it is so swift, so sly, and so terribly armed, that the effort of making a living is no effort at all to it, particularly in waters that are populous with smaller fish. Its temper leads to its undoing, for it will strike nine times in anger where it strikes once in hunger. Not long ago Mr. B. E. Veach, of Chicago, took an eighteen-pound mascalonge, and in its belly was a two-pound bass which had been captured not an hour before. Certainly that rover was not hungry, yet it struck the spoon with a viciousness of rush which carried it ten yards before it wheeled and leaped to the spurring of the hook. Indeed, most of the individuals of this species will be found to have full, or nearly full, maws when they are landed.

A more self-esteemed fish does not live. It is easily cock of its walk wherever that walk may be, and it comes in time intolerantly to object to the presence of any strange thing within its bailiwick. Lying in wait below a fringe of wild rice, full of food, but still anxious to do harm, it will often dart out and strike a spoon with its jaws tightly set, hurling it ten feet clear of the water. Having proven its right to undisturbed possession of its retreat, it sulks slowly back to its place, and doubtless feels the better for the demonstration of its authority. It will hammer things for which it can have no possible use, and it is not to be believed that it fancies them as food. There have been many instances of the mascalonge striking the end of a copper-tipped oar and leaving the marks of teeth on it. Many times it has struck from the hand of guide or angler a tin cup which was dipped into the river. It will strike not only shining objects, but dark ones. A piece of leather trailed near it will arouse its attack, or a bit of black cloth; or, in fact, any object which it thinks is invading its preserve. That it captures the black bass is proof enough of its speed. It is thought that the mascalonge is too slow for the brook trout, but this is merely theory, as they do not inhabit the same waters. It is a surety that it is able to capture anything which swims in its own waters, and that is as far as its powers need to go. Its strength of jaw is nothing less than phenomenal. At Boyd's hotel, in the Fifield district, is kept a No. 9 Skinner spoon, which is shown to curious guests who make inquiry as to the jaw muscle of the "musky." This spoon was struck by one of them in the Flambeau. The fish was hung slightly, just enough to irritate it to madness, and before breaking away it brought down its lips together in one maddened crunch. The spoon, which is of the usual strong and heavy metal, silver and gold on one side, bright scarlet on the other, is dented and twisted out of shape as if a man had laid it on a stone and smitten it time and again with a heavy hammer. It is easy to understand, looking at that spoon, that a man's fingers or his hand, once between such jaws, would come off in an instant. In fact, it is impossible almost to have anything to do with the "musky's" mouth, even when it is dead, and escape a gash or two. The teeth are so many, so sharp and set at such angles, that the utmost care is necessary in disengaging the barb, even though a 38-caliber bullet has crashed through the long skull, and the ego of the bandit has departed to await the twilight of the Gods, when, possibly, it will be given another chance to do some fighting. Guides often suffer from fingers sliced in the mouths of dead mascalonge, and they have learned enough to go about the job of handling one with circumspection.

In bait-casting or trolling it is well to carry a variety of lures, for the fish is capricious. The standard is frog, yet there are times when it will have nothing to do with frog, large or small, green or brown. It will destroy them, and render them useless to the man who purchased them, without any intent to feed upon them. The "musky" engaged in this sport exhibits a diabolical sureness of dash. It will strike them again and again an inch back of the hook. The frog is stripped of skin from the juncture of the thighs with the body. The body itself is untouched, and when the angler reels in he finds his bait with a pair of naked hind legs. The guides expressively call this "snatching a frog's pants," and that is exactly what it is. It will happen sometimes twenty times of a morning, and there is nothing that is more lacerating to the feelings.

On days when frogs fail of capture, pork-rind will often prove to be effective. The rind should be cut four inches long, a quarter of an inch wide at each end and thinner in the middle, so that it will wiggle in a lifelike manner when pulled through the water. If a mascalonge strikes it the barb must be reefed into him immediately, as he will spit it out if given opportunity. He strikes either in anger, or because he has been deceived. He has no liking for hog meat nor salt. The effectiveness of this lure is increased by a strip of red flannel fastened to the barb beneath the rind, and of the same width and an inch shorter. Rubber frogs, phantom minnows of any material, imitation perch, and such things, are of no value in Flambeau waters, whatever their makers and sellers may say that they do elsewhere. Experience has taught that the most reliable thing for mascalonge, either in trolling or casting, the most deadly and the most convenient, is the spoon, preferably showing the gold hue, and of no smaller size than the No. 8. The single hook is better than the gang as well as being more sportsmanlike, since it may be of a larger size. The feathers used with it should be of as bright a scarlet as possible, about the hue of the red ibis fly in fact. The

plumes placed upon spoons made for general sale are of too dark a red, never brighter than crimson, and often approaching maroon. It is preferable, of course, to troll or cast with the boat headed down stream, since when the fish is hooked he has the current to fight as well as the man at the end of the rod. In so rapid a current as that of the Flambeau, it may be doubted whether it is possible to land a thirty-pound "musky" if the fight be carried on up-stream. The drag which the weight of the fish, added to its strength, will put upon line and wrist under these circumstances is not short of tremendous.

River fishing is more difficult than lake fishing, and calls for a higher degree of skill, because of its narrowness and the tules and other water grasses near its banks. The first move made by any mascalonge after it feels the barb will be in the direction of the weeds. If it can gain them it will find the task of disengagement much easier. A half-dozen turns of the line around a root and a quick leap will do the trick almost invariably. It is the business, then, of the rodman to check or divert this first rush, and he must never allow sufficient line to permit his quarry to approach the banks. That is to say, he must get his fish within sixty feet of him and hold it there. If a twenty-five-pound mascalonge fought in proportion as the black bass fights, it could not be landed with an axe. After five minutes of flurry, however, and unavailing effort to attain to the refuge of the weeds, it will generally sink and think matters over. Sometimes it can be started by a series of rapid jerks and sometimes not. Always tapping the pocket-knife on the rod will fetch it, when other attempted disturbances have failed. The fascination of the fight is derived largely from the fact that the last half of it is much the more intense. The foeman will begin to do his best work only when he has been reeled within sight of the boat. He knows then that there is serious trouble toward, and every giant muscle of him will be brought into play. A man is sure of a mascalonge when it has been shot through the head, and is stone dead in the bottom of the boat—and only then. No man has ever fished for this murderer through a summer and failed to lose a half dozen after they had been brought close enough to be touched with an oar. How that last turn is made, just why a hook should lose its hold after remaining imbedded for half an hour, what is the peculiar twist of the body or fling of the head which begets freedom for the captive and seething wrath for the captor, no one will ever know. It exists, that is a fact, and it happens often.

There are few fishes which will take more out of a man, for the reason that the strain is never for a moment relaxed. It is fatal to permit the "musky" to have slack line. If a yard of loose linen be obtained by the warrior his lithe body describes at once a half-curve, the teeth close on the threads, and that ends it. "Traces," or metal snells, made sometimes of piano wire, sometimes of copper, and sometimes of twisted steel, are good things in their way—in fact, are necessities—but they are rarely more than eighteen inches long, being a sufficient protection against the teeth if the line be taut, and no protection at all if it be loose. It is the instinct of the mascalonge to cut its way through or from any difficulty. Its incisors are its means of livelihood and defense. Consequently the effort of the fish, when it has been balked in getting to the weeds and has seen the boat, is to bring its teeth into play. With this object in view, it leaps repeatedly up to the surface, endeavoring with each spring so to curve itself that its head will come in contact with the linen above the "trace." Every angler knows the exceeding difficulty of preventing slack when a fish has gone into the air, and because of these tactics, highly scientific in their way, many mascalonge have carved their way to liberty.

A student of physiognomy should have no difficulty in calling off the mental attributes of this fish, if shown one just before the fatal shot is fired. Almost total exhaustion has followed the frenzied battle, but its utterly villainous expression is in no wise changed. As the long head comes slowly above the water the face reminds the spectator irresistibly of that of a bulldog when beaten, but still undaunted. The lidless eyes glare with an absolutely venemous hate, the under lip is protruded, the mouth is half opened in a deathly grin, exposing the lacerated tongue. Some blood drips from the cruel jaws. That countenance seems almost to speak. Violence, cruelty, cunning, baffled malevolence, stubbornness, vindictiveness, are all there. We read sometimes, or are told, of one of tenderness, feeling woeful because of the liquid pathos in the swimming eyes of the slain deer, but no such feeling gets into the

breast of a man who has been fighting a mascalonge. Instead, he is apt to be triumphantly angry. There have been raw hands who lost control of themselves at the moment of victory, and swiped at their opponent with an oar or a club, being anxious to complete the work of destruction, and they not infrequently knock loose the spoon.

As the years have passed the average weight of mascalonge taken in Wisconsin waters has decreased. Five years ago this average was as high as fifteen pounds. Now more fish are captured which weigh less than ten pounds. Probably the average is not above eight pounds. However, in the pools of the Flambeau, and in the beautiful, deep-bosomed lakes which form its "chain," there still lurk monsters of thirty pounds and more, and one, if not more, of them falls to the lot of each angler who fishes consistently through September or October. This much may be said: Once he has fought the good fight to a standstill—once the shining mailed form of his adversary lies in splendid length along the boat's bottom—he will have a memory to last him through all of the after time. His wrist may ache for days, and the strained rod may come apart in the next encounter; he may have fallen and bruised shin and ribs; he may be utterly exhausted and sneakingly glad that the thing is ended; yet he will have a mind-picture of rushing river and churned water and glorious leaping and the strenuous life to carry with him always. He will be entitled to sit in the club o' nights and bore envious hearers into exasperation; to fight the battle o'er again for the benefit of anybody who can be hired to listen to him; to have the prize taxidermized and hang it up in his dining-room, after paying the artist $50 for $10 worth of work. If he adds a pound or two to the weight of the trophy, who is there to say him nay.

WEIGHED 22 POUNDS AND FOUGHT FOR AN HOUR.

THE SAVING OF THE ST. LAWRENCE

THE INTERNATIONAL PARK OF THE THOUSAND ISLANDS

By Leonidas Hubbard, Jr.

IF philosophers with a taste for history and statistics some would do worse than enter on a study of the relationship existing between the outdoor life of a people and that people's welfare. Outdoor life is, of course, a broad term applying not merely to days spent in recreation, but in any work or pastime which keeps men actively away from town and city in the woods or field, on the river or sea, climbing mountains or fighting foes. There would be interesting conclusions drawn from the lives of ancient nations which rose to power from shepherds, soldiers and sailors, and declined into effeminacy and weakness as profligate residents of great cities. There would be data relating to mighty tribes which came down from the forests of northern Europe to crush beneath their savagery the cultured states, and then to decay and die under the influence of civilization. Coming nearer to ourselves, the philosopher would find much of interest in tracing the outdoor influence in the building of an American nation and an American character. The molding of a spirit of independence which led the farmers of '76 to turn out, rifle in hand, to repel invasion; the preparation for deadly use of the weapon that gave America her freedom; the ability to march and work and fight untiringly; all these and many more topics would yield their share of data.

Within the past ten years three per cent. of our people have moved from country to city. If, as is assuredly true, outdoor life helps the morals, the courage and the health of a people, then something should be done to compensate for this moving cityward of the country population. Something must be done to give air and recreation to the city dwellers, or the nation as a whole will suffer. The great cities have made their breathing spots with lake and lagoon and zoo, where men and women and children may go for fresh air. But fresh air alone is not enough. Fields and mountains, woods and lakes are needed to give a love of nature, to instil the sense of glorious independence which comes with solitude. Wealthy men are helping to furnish an answer to the problem with their country clubs, their farms, their shooting preserves, and the new country life which within the last few years has sprung up lustily in America. But these men of wealth are only a fraction, an infinitesimal fraction, of our people. Their movement does not reach the mighty bone and sinew of the Republic. Something else is needed. This something else is suggested in the growth of the annual summer exodus of our city people to farm or woods or mountain. If this can be encouraged and developed, it will mean much indeed for our cities and our citizenship. But between the making of country homes by the rich, and this popular exodus, there comes in time a clash. There need be no such clash and if the States are wise there will be none, but without such wisdom it will come. It will begin to be approached when the man with small income takes his tent and goes out for a two weeks' vacation in summer time to find the stream where he once caught trout owned by an individual whose signs warn the public to keep off; when he goes to the bit of woods beneath whose trees his tent was pitched last season, and finds there a hundred workmen building a summer palace. At present there is no trouble, for he can move to the next stream or the next forest, and there find room. But next year he will find those preserved, and must go farther. In time, if the present tendency continues, and no other provision is made residents of many parts of the country will find no camping place with a suggestion of the old-time wildness without going far afield. There is nothing in all this to deprecate the movement toward the country.

Such a movement is a glorious one that will give bone and muscle and courage to men who might under city life alone degenerate. I would not for the world have such a movement discouraged or checked. There is room enough for large summer homes, and wild camp grounds enough can yet be secured for those who can afford no better country residence than a tent and no other tract of ground than that which is free to all mankind.

And right here is the need—ground that is free to all—breathing spots for the public; breathing spots where men may cast aside the restraints of city life and live for a season as their forefathers lived. If such spots are to be found a few years hence, they must be set aside by the States at once.

Hail, then, to the movement of New York and Canadian law makers which aims to set aside as an international park, free to all men, some of the lands within the far-famed Lake of the Thousand Islands. Here nature created one of her most beautiful works. It is as though the St. Lawrence were too small an outlet through which to pour the united flood of the Great Lakes, and a funnel were needed, a funnel at one end little smaller than Lake Ontario and tapering to the size of the river. Or, again, it is as though the river grew out of the great lake and that nature had dropped her thousand islands into it, causing the water to overflow its banks and expand the river's source into a modest lake. For nearly fifty miles the expansion of river into lake continues, and throughout the whole distance the clear blue waters are broken every here and there by island after island. Here is one that rises above the water's edge as a mere peak of rock, red and brown and gray, in combination to delight the artist's heart. There is one whose rock foundation has a covering of soil on whose surface grow grass and flowers and beautiful evergreens. Now comes one whose breadth and length are such that roads have been made across its surface, farms have been laid out, barns and houses built. Look whichever way one will he sees the constant succession of brown rock, green island and blue water. Such a spot could not remain free land so long as it was offered for sale, and so long as the East held men with a longing for the out-of-doors in their hearts and money to gratify these desires in their pockets. So thither came millionaires and island after island was purchased to become the exclusive camping place of some wealthy owner. There are two classes of men in the world: those who look on and complain because things are not different and those who set about to change them. To the credit of the region be it said that the Lake of the Thousand Islands and the banks of the St. Lawrence have bred sons who belong to this latter class. The residents of the towns and villages of this region saw the trend of things and realized that in time their camping places and the camping places of others from the cities far away would be cut off. They spent no time in complaining, but set about the task of finding a remedy. The Anglers' Association of the St. Lawrence was among the first agitators of the proposition to set aside some public lands among these islands. The Fish, Game and Forest Commission of New York was interested; a conference with the corresponding Canadian authorities was brought about and a movement was started toward the making of a public park for the two nations.

The mountains have their charm for summer rest-seekers. The seashore likewise offers a recreation and a happiness peculiar to itself and each has its lovers. But this region of island, river and lake is different from either. Pitch your tent upon some bit of land which rises above the waters and prepare for a summer that shall stand out long among your happiest experiences. A group of pine or fir trees furnish shade; a rock gives protection from the western winds. A stone's throw, or less, away are the waters, ever fresh and blue, from the lakes above, never stopping to grow sluggish, but ever hastening onward to join the sea. Now waken before the sun, shake off the inevitable drowsiness and get the joy that comes from breathing early morning air and working or playing in the early hours. Out among the channels bass are waiting for their breakfasts. Go there with a light rod and a pail of minnows. Now the hungry fellows are taking your bait and fighting as bass fight only in clear cold running waters. Or, degenerating the least bit, lay aside the light rod and take the trolling line. Such muskellunge are here as you will remember to your dying day, if you chance to lure one of the big fellows into striking. Back and forth you troll; now you think of giving up and going in to breakfast, for the sun, bright and red, has risen above the eastern island,

and is sending down his rays so strongly that you fear the fish have stopped their biting. But there is a strike. Oh, you are fast to a log. No, not a bit of it, you are fast to a wild and desperate fish which runs to stern until your hands are blistered with the flying line; darts forward until you can scarcely keep the braid taut and, when you have utterly failed in attempt to coil the line neatly on the bottom, takes a notion to go straight toward the center of the earth, while you madly try to prevent what seems sure to be a hopeless tangle. Now comes the first sight of a glorious fish, the tired approach to the boat; the wild darting away and the final capture. Such is a morning's work among the Thousand Islands.

Now it is night. You are out among the islands in canoe or skiff or catboat. It is one of those long evenings when day fades so insensibly into twilight and twilight into dark that you can not tell where day ends and night begins. The red is dying out of the West, when off across the waters to eastward comes a trace of light. The evening is warm, yet not too warm. The silence of a summer night hangs over all. The waves lap against your boat and break gently upon the rocks of the nearest island. Faintly, so faintly you must strain your ears to hear the sound, comes the tinkle of a cow bell from one of the larger bits of land and far off, from you know not where, float the strains of an orchestra. Now the eastern light becomes more intense and suddenly, when you feel that it will never come, the moon, grand and red bursts above the waters. Now higher and higher it rises. You never saw it so near at hand before, and soon its silvery light steals here and there to every nook and crevice of the Lake of the Thousand Islands. There, before you, it lies in all the soft radiance that a summer moon can lend. You turn homeward, speaking in whispers out of respect to the silence. A new love of nature is in your heart and a yearning after new ideals. Such is the witchery of a summer moon among the Thousand Islands.

But what is the charm of the days? Do you recall the time when you read Leather Stocking tales? Do you remember the envy that rose in your heart when the all-skilful hero whom you had followed through the forest's wildest wastes, whose rifle never missed and whose love of woodcraft never failed, ushered you out upon a mighty river where islands were as numerous as rocks in the Adirondacks or trees in the North Woods, and whose knowledge of the winding channels and wood-covered spots of land saved his life and other lives—yours included if you are a really good novel reader—and brought confusion, dismay and death to the enemies? Oh, how wonderful it all seemed and how very, very far away. Now take your catboat—no, a canoe, a dugout or a birch bark at that, is the only craft for a Leather Stocking—and go out yourself to explore these blind channels. There is work for a summer. And when the summer is over you will feel that not a beginning has been made. While other men are following their fads have one of your own and follow it. And none, I warrant will bring greater pleasure than just such a bit of exploration. There is a pleasure in following difficult paths and coming to know them by oneself; a pleasure that more than compensates for the labor one expends. One who has studied a region comes to love it and to love nature. More than this he grows to feel the self-reliance that comes from finding one's way through unknown regions. What boy or what man would not be better, stronger and wiser for summers spent in just such pastime.

And where is a better place than here in the Thousand Islands where the glamor of adventurous deeds of pioneer history hang heavy about each bay and inlet? Among these islands darted, once upon a time, the canoes of savage Iroquois and Algonquin. In the brush on yonder brown rock hid a party in war paint with bows strung and arrows in hand. And down at the point on that larger island did two savage war parties meet tomahawk in hand to batter out each other's brains. There were even more romantic days to follow those bloody years when savage wars reddened these waters. Hardy explorers from France penetrated here on their way from the St. Lawrence settlements to the Great Lakes. Read from the dusty parchments what De Courcelle wrote two hundred and forty years ago when he told of his expedition against the Mohawks. "Navigation is easy when one has passed the infinity of little islands which are at the entrance of the lake in such numbers that the most experienced Iroquois pilots sometimes lose themselves there and have difficulty in distinguishing the course to be steered in the confusion

and, as it were, in the labyrinth formed by the islands. Some of these are only huge rocks rising out of the water, covered merely by moss or a few spruce or other stunted wood, whose roots spring from the cleft of the rocks which can supply no other aliment or moisture to these barren trees than that which the rain furnishes them."

Or read the quaint report of Count Frontenac in 1673: "We had," says he, "the pleasure on the way to catch a small loon, a bird about as large as the European Outarde, of the most beautiful plumage, but very difficult to be caught alive as it dives constantly under, so that it is no small rarity to be able to take one. A cage was made for it and orders were given to endeavor to raise it in order to send it to the king. Having passed all that vast group of islands with which the river is spangled we camped at a point above the river called Gananoque, up which many of the Indians go hunting. Two more loons were caught and a kind of deer, but the head and antlers are larger than the deer of France."

Who could not be happy roaming among these islands, conscious that here Iroquois met Algonquin; that here the early French explorers studied geography, befriended savages and caught loons to send home to their king; that later these same islands became a rendezvous for the British army and that from here went a part of the ill-starred expedition which came to naught when Burgoyne surrendered on the field of Saratoga? A summer in such surroundings will bring not only health and courage and self-reliance to him who sails the catboat and paddles the canoe but will bring him new ideals, a purer heart, a cleaner conscience. There is too much of a tendency among us to think of a summer's outing as a piece of extravagance. It is not so. Neither is it merely an insurance against illness. It is more than either. It is tuition paid to nature's great university where she teaches us, not the learning of books, nor mere science, but the eternal wisdom of the ages.

It was in 1896 that definite action was taken toward the making of an international park. Then the legislature of the State outlined a boundary for the American portion, a boundary that includes the whole American shore, from Lake Ontario to Massena. But, sad to relate, within that boundary, New York owned no land at all. All her islands had been taken by private parties. So an appropriation was made of $30,000, which the Fisheries, Game and Forest Commission was instructed to use in the purchase of park land. The first purchases consisted of Mary's Island, near Alexandria Bay and seventy acres on the site of the old canoe camp at the foot of Grindstone Island. Since then other purchases have been made and options have been obtained on land which is to be added just as soon as appropriations will warrant.

The Dominion Government was able to do its share more handsomely. On the Canadian side were some seventy-five islands that still belonged to the government. These were at once removed from the market and opened as a part of the park, free to both nations. With this start the International Thousand Island Park is well under way. There are details to be carried out, many of them. New York must give her commission more money. More land is needed at once, for as the demand of the State becomes more urgent the prices offered and asked by individuals rise. Then, too, there is work to be done. Already the commission has erected shelters for storm-caught pleasure seekers and built docks for visiting vessels. It is building on the islands also, a system of fireplaces where campers and visitors may cook their meals. This is a good step for many a pretty bit of land has had its last bit of timber swept away by some carelessly built fire.

There is one other need here; uniform game laws. Shooting and fishing are good in their seasons but the laws on American and Canadian shores are utterly different. Americans, shame on us, may shoot ducks in spring, while men of Ontario can not. Fish laws, too, must be altered and made uniform. When these details have been arranged the Thousand Island Park will be preserved for all time as free land where all may pitch their tents or anchor their cruising yachts.

THE SPORTSMAN'S VIEW-POINT

By Caspar Whitney

Two Sides to the Shield. A great deal of newspaper correspondence and general agitation appears to have followed swiftly upon the suggestion of some Englishmen to close the Henley rowing regatta to foreign entries, and, as usual, their motive is misinterpreted on this side the Atlantic. So far as amateur sport is concerned, Americans and Englishmen are forever gazing steadfastly on reverse sides of the shield. There is distinct misunderstanding among us as to the real significance of the word amateur; not in an ethical sense, not its application in the spirit of athletic law, but its full import with relation to recreative life.

To the average American mind "amateur" conveys only an impression of ethical status; to the Englishman, it may mean less than that, legislatively, and more than that, esthetically. Americans concern themselves with the letter of the amateur law; Englishmen with the spirit of it. Thus the American sees in England a genuine spirit of sport for sport's sake, flourishing amidst disregard of the letter of the law which in America would not be tolerated among amateurs. If, for example, the American standard was applied in England, scores of amateur cricketers would be declared professionals; and scarcely a 'varsity crew or football or other team at Oxford or at Cambridge could escape without one or more of its number being found ineligible according to the rules obtaining and respected at the leading American universities. The truth is, such rules are not necessary in England as they are in America, for the very simple reason that Englishmen play the game for sport, and Americans play it to win. There is the whole story of the difference between the American and the English attitude. And it is characteristic not only of the athletes; it is the reflection of public sentiment. It stands for national temperament.

Each is sincere in his way, and the manner of neither is ideal. The English cricketer's capacity for accepting expenses is not consistent with his otherwise sportsmanly demeanor; nor are unsportsmanly tricks like badgering the opposing pitcher by distracting cheers, creditable to the American university athlete, who is so fenced in by rule against professionalisms. The unswerving determination of the American to win carries him into long and serious and sport-destroying preparation, with everything subordinated to the single thought of winning; the Englishman's somewhat dilettante attitude towards the game, and his comparative complacence concerning results permits him to accept, and even on occasions to insist upon, board, lodging, laundry and cigar bills, without a suspicion being aroused that these creature comforts are any inducement to his playing. There are those in England who see nothing but evil in American athletic methods, just as there are those over here who can recognize no good in anything English; in my opinion, however, the ideal type of an amateur athlete would be constituted of one (generous) part English (love of sport for its own sake) and two parts American ([1] ambition to win, [2] respect of the letter of the ethical law.)

Leave Henley Alone. With a better understanding of the Englishman's mental attitude towards his sport, the supposed offensive references disappear from the recent newspaper communications of Dr. Warre, headmaster of Eton, and Mr. R. C. Lehmann, editor of the *Daily News*, and well known and favorably remembered in America.

I have, I must confess, a great deal of sympathy with the Englishmen who seek to close Henley to foreigners; they foresee a time-honored, thoroughly enjoyable week of pleasuring turned into a world's championship regatta, with all the training and heart throbbing and business which a re-

gatta of such importance suggests. At present Henley is a week of pure sport and amusement; there is no period of preliminary training for any crew, no extraordinary preparation for any single event; the boats hold oarsmen who are still at the university, and oarsmen who have been graduated from one to half a dozen years. The crews that are entered for the Grand Challenge Cup, or other eight-oared races, divide and row as fours and pairs on different days during the regatta.

Now, it would be manifestly unwise and unfair to an English eight, got together without special preparation, and so divided among events during the week, to be raced in a final Grand heat against a visiting eight which for an entire year had been carefully training for this particular event. The result would be inevitable; either the English crew would be unable, through the haphazard manner of its make-up, its lack of training and its division for other events of the week, to do itself justice, or there would have to be a revision of methods at Henley. This is precisely what Englishmen do not want, and any American sportsman who has felt the atmosphere of regatta will entirely indorse their decision. To revise Henley methods would be a serious step, as it might lose to English boating that considerable class of rowing *alumni* who have neither time nor inclination to go in for prolonged training, but are keen for the regatta, so long as it remains sport, and not too exacting.

By all means close Henley to foreigners, if to leave it open means a revision of present methods and loss of tradition; and if there must be a world's championship event, why should not the Henley Regatta Committee create one, to be rowed during Henley week, and open to the ambitious oarsmen from Cape Cod to Bankok?

American Henley Wanted.

The Henley idea is just what some of us have been trying to implant among graduated American college oarsmen; with five great universities turning out oarsmen every year, we have no suitable regatta, such as Henley, where they may keep up active interest in the sport.

The effort now making to establish such an annual regatta at New London is meeting with encouraging response; there is almost a surety of it materializing next year.

Sport for the Sake of the Game.

'Twould be more satisfying, no doubt, if our university undergraduates took their sport less seriously; but it is to be remembered that the very qualities which make the American athlete intolerant of any prospect less favorable than victory, are the identical ones that turn the wheels of this work-a-day world. And such admirable qualities should not be too lightly esteemed, for, after all, the most important service of athletics is by way of preparing us for the more serious game of life. Only we of America very much need in our games the leaven of play for play's sake.

There is no question that our games would be more sport if the preparatory periods were less of a business; and thought of this characteristic no doubt influenced Dr. Warre and Mr. Lehmann in uttering their protest against Henley being turned from a week of sport into a free-for-all rowing championship. To say, as many thoughtless ones have, that Englishmen are moved to close Henley for fear of an American crew is, of course, obviously absurd; in the first place, Englishmen are not built that way; and in the second, they know more about rowing than we do, and probably will for several years to come. But they do not wish to make a business of what is now a pleasure—and I fully indorse their sentiment.

It will always be quite simple for any American crew seeking a race on the English Thames to challenge Leander, or any other club; and I fancy it will be accommodated.

College Players in Hotel Baseball.

There are fewer college players, this season, on summer hotel or resort baseball nines than in any year since the beginning effort to free university sport of this semi-professionalizing element. Those who are playing and propose returning in the autumn to their respective institutions, will find all the games closed to them, so far as university representation is concerned. For several years the majority of the leading colleges have had a rule barring from 'varsity teams the man who has accepted his board or other expenses in return for playing on a hotel nine; but, frankly speaking, Pennsylvania is the only one to have lived up to the rule. Last spring, Harvard, Yale and Princeton were all offenders; *i.e.*, they played men in

direct disregard of their own rules which forbade it.

The uncertainty concerning the guilt of students, and the confusion among the latter with regard to the precise status of summer nine ball playing, has, I must add, provided good reasons in some directions for generous interpretation of these rules. But in June the faculties at Harvard, Yale and Princeton warned the students, and the small number of men playing on hotel teams this summer has been the happy result. This autumn, no doubt, the rule will be strictly enforced to further free college sport of objectionable features. The outlook is very good.

In the South, the Intercollegiate Association has had and is having a very severe tussle with the summer nine question; and its task has been the harder because it must work alone with little or no coöperation aside from a few colleges. The southern public appears to have no sympathy with pure sport; it is not educated up to it; and this seems true also of a very considerable proportion of the press. Georgia, as a State, is perhaps the least enlightened of all, and in darkest Georgia there is open athletic corruption and outward opposition to the Association. Because they are so completely surrounded by an actively unsympathetic atmosphere, the valiant work of the faculties of the Mercer and the Georgia State universities is therefore the more commendable, and the splendid results they have obtained the more encouraging. Meanwhile, the Association, continuing its missionary labors, has put additional obstacles in the path of the semi-professional by demanding of all challenged college players an affidavit that he received "nothing more than expenses." That, of course, is a very slight obstacle, and by no means guarantees college nines free of professionalism; but it is an earnest of the Association's good intentions, and, at least, a beginning.

Of course, there is but one way to meet this summer nine problem, viz., to forbid students playing on such teams, and to accept membership on any hotel or resort or other nine having paid members or charging admission fee to its games, as *prima facie* and all sufficient evidence for disqualification.

It is in such cases impossible to get legal evidence, and unnecessary; an athlete should be judged by his associations. The right kind of college man will avoid questionable associates.

Amateur Baseball Problems in the West.

Baseball conditions in the Middle West are perhaps even less pleasing than they are in the South. The situation shows some rather curious features. Although there is a great deal of ball playing all over this great section, with teams innumerable, yet there is astonishingly little real interest taken in intercollegiate baseball. This is I believe, because few, I think I can almost say none, of the Middle Western college teams is entirely free from the semi-professional taint of the student who has played on hotel or resort or other variety of summer nines for his board, or one or another kind of "expenses." As is quite usual, whenever this form of offence occurs, it has been impossible in the West to obtain definite proof, although violation of both the spirit and the letter of the law may be flagrant.

The disposition at the great majority of the colleges appears to favor "letting things alone," and so, while some effort is made to carry out the letter of the amateur law, no attempt is making to uplift the spirit; thus the status of college baseball is of an exceedingly low order, and the outlook very discouraging. Indeed, at Minnesota, where there seems a deeper sensibility than elsewhere, of the game's degradation, there has been, in the hopelessness of uplifting baseball, serious thought of dropping it from the list of sports.

There need be no such state of affairs if Minnesota, Michigan, Wisconsin and Chicago would get together on the question, and decide to handle the semi-professional baseball player with the same spirit and thoroughness as they did the professional football player a few years ago. Heroic measures are needed now as then; and these four universities should set the example by beginning with their own baseball candidates.

Reverting to the Henley matter and to the English attitude toward their sport, our summer baseball situation is practically duplicated in English cricket; except that their board and expenses are furnished openly by a club instead of secretly by hotel or town committee, and no objections are offered. But in England the moving spirit, as a rule, is love of the game; and no scandalous advantage is taken of the license;

whereas here, as a rule, the incentive is a summer's keep, and through the practice is opened a way which is taken advantage of to corrupt college sport.

Elk and Moose in the Adirondacks. Western Big Game in Fair Condition.

Friends of the law passed by the last New York legislature, for the propagation of moose and elk in the Adirondacks, have good reason to be pleased with the preparations that are making for the experiment. Already sixteen cow and four bull elk have been presented to the State by Mr. William C. Whitney, and liberated in the section set aside for the purpose. Mr. George J. Gould is, I understand, arranging in Canada for a small herd of moose which he will give to the State.

Thus the movement, which was viewed as something of a joke at its earliest agitation, is going forward excellently advised, and so well supported that the $5,000 appropriation will go farther than was expected. Frankly, I still doubt if elk and moose in a wild state will thrive naturally in the North Woods; however, it is a worthy object, if for no other reason than that it interests people in our disappearing wild game animals.

Those who go into Maine and into the Rocky Mountain sections for an annual hunt will be cheered by the information that the game very generally came through a long, hard winter and severe spring, in much better shape than was to be expected. In the Jackson Hole country, for example, there was a long and cold winter which the game stood splendidly up to April 1, when there came a succession of severe storms which caused quite a loss, owing to the weakened condition of the animals. Still, the loss was not large as compared with other years. There seem to be more antelope than last year—there ought to be a three-year closed season on antelope to give them a chance to recuperate their fast-thinning numbers—and elk are looking particularly well.

Harvest Time for Cold Storage Warehouses in Illinois.

Because of the carelessness of a clerk in the Game Commissions Committee room, the great State of Illinois is to give no protection to quail and woodcock this season. In drafting the bill for the legislature, an entire line was inadvertently omitted, and so it became law. And the exasperating part of it is that nothing is being done; nothing can be done, it is claimed, to supply the deficiency. Thus a mutilated law stands which pleases none in the State but the cold storage warehouses, that may now, unmolested, reap a harvest. The original clause forbidding the birds being in possession still stands under the old law; but that clause appears never to disturb the cold storage people, either in Illinois or elsewhere, except when authority goes with it for wardens to personally inspect warehouses on a search warrant from the court. The opportunity for bird slaughter is such an unusual one, and likely to result so harmfully, one would think that in some way or another the Illinois courts might repair temporarily the breach made by the Game Commission's clerk, and so come to the rescue of the quail and woodcock of the State.

By way of illustrating how ineffective are protective laws, so long as the cold storage warehouses remain closed to game warden inspection, a report comes from Omaha, Neb., that the poultrymen of that town have in cold storage tons of quail which they secured last spring in anticipation of the two-year closed season, for which bills were passed early in 1901 in Nebraska and Missouri; the bills forbid shooting, but do not touch the cold storage warehouses, and allow restricted exposure for sale. This reminds one of that fool legislation in certain temperance States—Kansas, for example, among others—where the saloons are closed up tight, but the breweries permitted to run at all times and to any number!

American Athletes Abroad.

With the exception of M. W. Long, the four American athletes who are making the rounds of British athletic centers appear to be having their fair share of success. But Long is very palpably off his top form, and has not come within four seconds of his quarter-mile record. His chief opponent has been R. W. Wadsley, a thoroughly good man, who, however, is not thought better than 50 seconds even at his very best. Until this season, indeed, Wadsley had been a fair sprinter, and had not gone in for the quarter; he has beaten Long on two occasions in no time better than .50⅘, which is not remarkable, all thing considered. As Long's

record is 47 seconds, an idea of his comparatively poor condition may be realized.

A. C. Kraenzlein has had some ill luck, with an injured knee, which put him out of shape in the earlier games, but of late he has apparently recovered his form. He put the British 120 yard hurdle record at $15\frac{3}{5}$ seconds in the championships held at Huddersfield, and subsequently at Birmingham he made it $15\frac{2}{5}$.

Arthur Duffy, however, has been doing the star running; the English climate seems to suit him nicely, which is a bit curious, for, as a rule, it takes the speed out of strangers, although giving the distance men additional endurance. Duffy's performance of one hundred yards on a grass course in $9\frac{4}{5}$ seconds was very remarkable, and by all accounts appears likely to stand as a record. Reports claim the course to be level, and that it was measured after the race and found to be the correct length. If it is allowed, as seems likely, it will be the most notable record of the year. I. K. Baxter has about equaled normal form; he has won on the majority of occasions, once high jumping 6 feet 1 inch, but he was beaten the other day at 5 feet $11\frac{1}{2}$ inches by P. Leahy, an Irishman of considerable athletic ability.

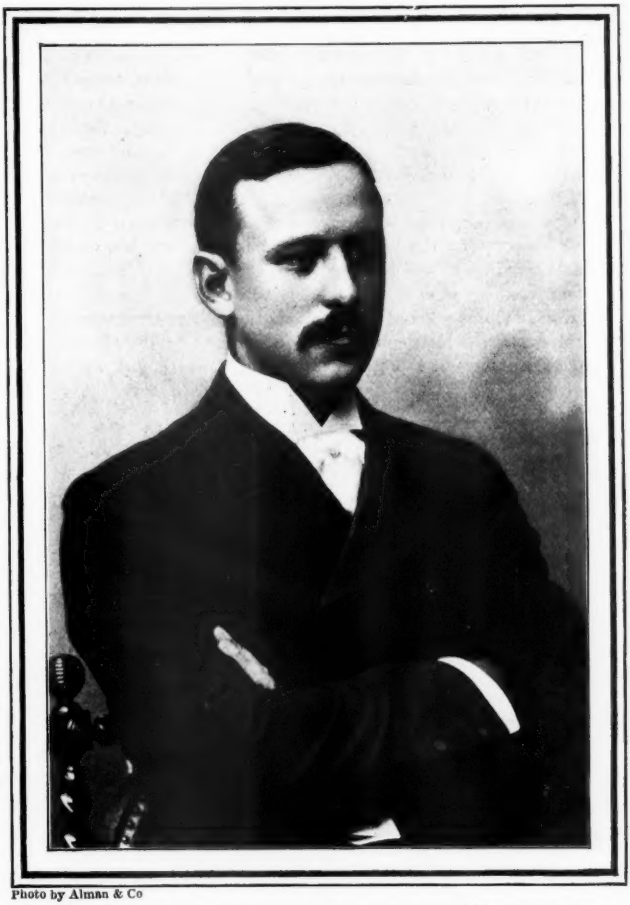


Photo by Alman & Co

MR. W. B. DUNCAN, JUN., WHO IS MANAGING THE *CONSTITUTION*.

Irishmen are always distinguishing themselves on the athletic field, but this year is exceptional with such a wonder as P. S. O'Connor, who, having made a world's record (May 27) of 24 feet 9 inches, is now said to have done 24 feet $11\frac{1}{4}$ at the Kilkenny sports (July 25). Nothing official has reached us concerning O'Connor's great broad jumping figures, but the very noticeable fact that Kraenzlein has avoided meeting him is significant of the Irishman's prowess; although I have always believed that Kraenzlein could, in condition, beat his own American record of 24 feet $4\frac{1}{4}$ inches.

Canadian Salmon Fishing Injured by Government Netters.

The revenue derived from the annual salmon fishing in Canada would seem to be sufficient reason for the Dominion Government to give prompt official consideration to the marked poorness of the sport this last season. There is significance

enough in the incontrovertible statement that while the rod fishing was generally bad, that of the nets was excellent. For example, at the mouth of the Restigouche the nets did better than for several years past, while the angling in the river was very poor until the second week in July, when nearly all the nets had to be taken up because of their becoming foul.

The government nets at the head of the tide water in the Restigouche have been for years a curse to the river angling, covering, as one of them does, the entire channel it occupies; while a second net in another channel captures, by means of a series of "wings" reaching to the other shore, every fish that escapes the first net. This means that the two nets secure about every fish which comes along.

Now, these nets are set for the ostensible purpose of capturing three hundred breeding fish for the government hatcheries, and the superintendent claims that the number taken annually is below this; but there is every reason to believe that the real number taken is considerably in excess of one thousand salmon, the great majority of which are sold by the superintendent.

As if to emphasize its disregard for anglers, the government has recently increased the number of nets on the tideway, in return, no doubt, for political support, and, except

THE CHAMPION *COLUMBIA*, MANAGED BY MR E. D. MORGAN.

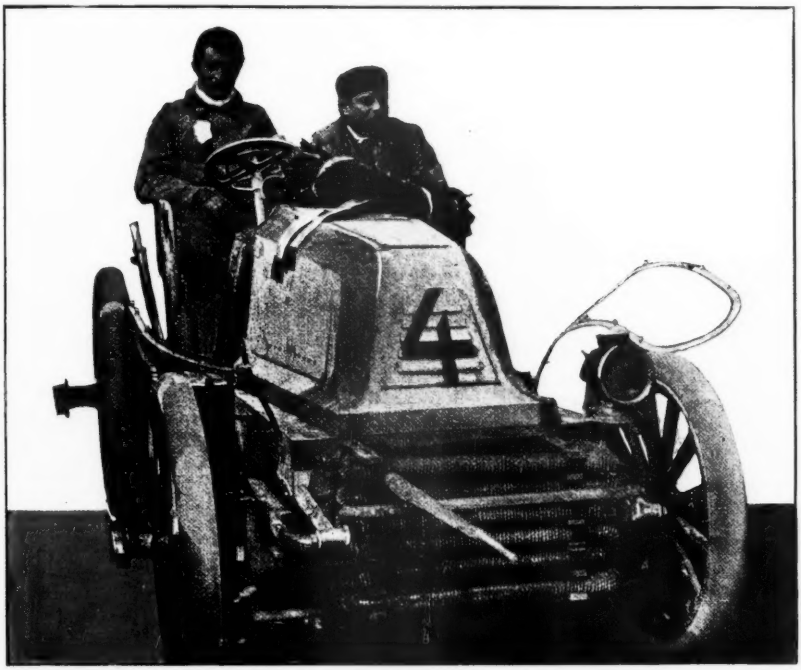
for those salmon which ran up the river before the nets were in place, scarcely one killed by anglers failed to show wounds about the head and back, in evidence of its successful efforts to escape from the nets. The size of fish taken this year by anglers was also much less than formerly, which is another proof of the deadliness of the nets.

Perhaps one of the chief causes of the dearth of fish in the Restigouche was the violation by the netters of the law requiring them to lift their nets from Saturday night to Monday morning. There was nobody to see that the regulation was enforced, and so most of the nets were kept down all the time. If something of a remedial nature is not done by the Canadian Government, the Restigouche and other salmon streams will soon become worthless for angling. Considering that these fishing leases take a good many thousand dollars, one way and another, every year into Canada, the Dominion government must awaken to the wisdom of action.

The Quebec Fish and Game Committee Finds a Mare's Nest.

Not long ago, the Fish and Game Committee of Quebec made the somewhat startling announcement of a discovery, in riparian legislative lore, which gave the Committee full control of the fishing in all inland navigable waters of the Province, except in cases where the Crown, in its original grant of land, had divested itself of such fishing rights. So many queer things have been dug up from royal grants, especially of the Crown of France, that the Quebec Committee's claim caused some dispute in Dominion legislative circles, and no little anxiety among riparian owners. But there seems no need for either argument or worry.

The famous Christie Robertson case, decided by the British Privy Council in 1880 or 1881, vested in the riparian owners on non-tidal waters the ownership of the land under water in front of their properties, to the center of the stream. This was to apply to all the Dominion, and the Provinces



HENRI FOURNIER AND THE AUTOMOBILE WITH WHICH HE WON THE RACE FROM PARIS TO BERLIN.

acquiesced in the decision, finding it especially agreeable, as it gave them rights, as to their ownership of riparian property, which before then had always been exercised by the general government of the Dominion. These rights the Provinces have ever since leased to their great advantage and considerable profit, and grants of land they have made since then have expressly excluded rights of fishing, if on salmon rivers. Of course the property granted previous to the Christie Robertson decision carried the riparian rights with it, the owners standing in the same position as to those that the Provincial Government occupied.

If the Quebec government were able to take from riparian owners on salmon rivers the rights they now enjoy, it would involve a loss of what has cost hundreds of thousands of dollars, and reverse the decision of the British Privy Council. It seems to me that Americans who are interested in Canadian fishing rights may, with no great

MALCOLM D. WHITMAN, LAWN-TENNIS CHAMPION, SERVING.

CRESCEUS, 2.02¼; WORLD'S RECORD.

apprehension of results, view the impending conflict between the Quebec Fish and Game Committee and the Privy Council of Great Britain.

Two-Minute Trotter Approaching

Before this writing reaches the eyes of OUTING's readers, Cresceus and The Abbot will have decided their first match race, and the two-minute trotter may have revealed himself. We have never had in one year two animals of such marvelous speed, and it would seem as though now, if ever, that two-minute mark is to be reached. Yet the progress has been slow. Jay Eye See made it 2.10 in 1884; Maud S. put it at 2.08¾, in 1885, where it stayed until in 1891 Sunol reduced it to 2.08¼. Nancy Hanks created the sensation of the horse world in 1892 by bringing the record down to 2.04, and Alix placed it at 2.03¾ in 1894. The Abbot placed it at 2.03¼ last year, and Cresceus has already twice reduced it this season; in the closing days of July at Cleveland, he trotted in 2.02¾, and on August 2 at Columbus, made the extraordinary performance of a mile in 2.02¼. The first quarter was trotted in 29¾ seconds, the second quarter in 30 seconds, making the half in 59¾ seconds—faster than a horse ever trotted; the third quarter was done in .30½, and the last in .31. It would seem beyond physical endurance to better that time by 2¼ seconds; yet if it is possible to horse flesh Cresceus will probably accomplish it, for he not only has the marvelous speed, but undaunted courage.

If he keeps his health, he will most likely beat The Abbot, for the latter has perhaps done his best, while Cresceus is at his very prime. Boralma is also a coming horse, with a chance to beat The Abbot.

Close Play for Polo Championship.

Although one or two more teams may enter, it is entirely likely that play for the polo championship will be among Dedham, present holders, Lakewood, Myopia and Bryn Mawr; and while four entries for the gold cup seem few in comparison with the number playing this season, yet those four assure perhaps the most even contests yet to have been seen. Myopia, having imported a back,

Mr. Charles Wheeler, from Philadelphia, has been this season showing its best form in four years; there is less emphasis of the individual, which in the last couple of years proved so detrimental a factor in their match play, and an evident seeking after team work. The team includes Messrs. C. G. Rice, R. G. Shaw, 2d, R. L. Agassiz, Charles Wheeler; they have played some very good games this year, and none better than the losing one, 14-15, with Westchester, whom they allowed 4 goals on handicap.

Mr. George Gould, the moving spirit of the Lakewood Club, has, within the last two years, left little undone to put his club in the competitive fore rank of the game; certainly no money has been spared in the making of the field, while entertainment of both man and beast, incidental to match play on the home ground, is luxuriant. Having no material native to the soil, the upbuilding of polo-playing Lakewood has been at the expense of other clubs; which is to be regretted if for no other reason than that it reduces the number of first-class contestants. This year Lakewood's team will consist of Messrs. J. M., Jun., and L. Waterbury, of Westchester, Foxhall Keene, Rockaway, and R. J. Collier, who is identified with Lakewood as much as with any other section. The Messrs. Waterbury and Keene are three of the strongest players in the game to-day (adding Mr. John E. Cowdin would make potentially the fastest and best all-round four America could produce); Mr. Collier has developed into a hard-riding and ubiquitous number one, and the team has an excellent chance for premier honors, assuming that it secures team play.

Bryn Mawr, which is simply the rechristening of the old Devon Club, has shown enough fine work this season to make it very much in the race for the championship; like Dedham, it is not a combination of brilliant individuals, but a team of four first-class men whose only thought has been to attain the greatest strength through united effort. And they have succeeded admirably; Dedham (Allan Forbes, E. H. Weld, W. H. Goodwin, Joshua Crane) won last year from Westchester (E. S. Reynal, J. E. Cowdin, J. M., Jun., and L. Waterbury) by the narrow margin of one goal, through team play, although individually their opponents, with the exception of Mr. Reynal, were accounted the superior. This year their task will be harder, because the lesson they administered in 1900 had a wholesome effect, and team play has been the sought-for quality all the season. Among four such teams as these, the chances of no one show prominently, and the winner will be well entitled to championship honors.

Westchester, Rockaway and Meadow Brook, the three oldest clubs in the Association, will not be represented in the championship; a lamentable condition for which the lack of club loyalty, among players, is largely responsible.

Scratch Tournaments Serviceable.

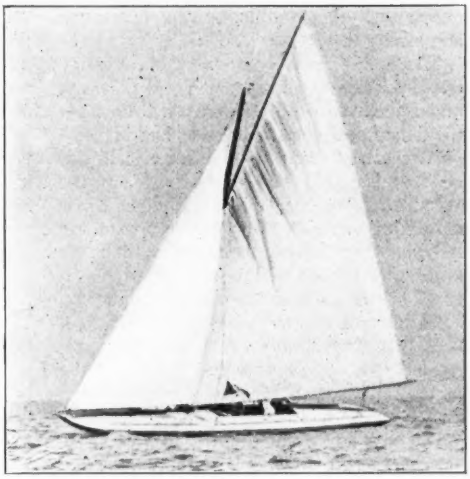
The most pleasing feature of this season has been the continued improvement of the second-class men, due to the establishment of Junior Championships (for teams with an aggregate handicap not exceeding twenty goals) and the encouragement of the younger players. In the vicinity of New York the results of these wise features are abundant, and Mr. W. A. Hazard, of Rockaway, is entitled to congratulations; for it was he, who, three years ago, first put life into local polo, which, apart from a handful of cracks, was fast becoming moribund. Several very good teams have developed directly because of it, and several of the Juniors are fast attaining brilliancy. Most notable of these is, perhaps, Rene La Montagne, Jun., who comes honestly by his skill and keen eye for the ball; it is in the La Montagne blood from the boy's grandfather through every male member of the family.

The Junior Championships will be held also on the Brookline field, beginning September 2d. Last year the Philadelphia Country Club (J. B. Lippincott, M. G. Rosengarten, Jun., A. E. Kennedy and J. Frank McFadden) were successful, beating by 8½ to 3¼ goals the Rockaway four, and now hold the Championship Cup, which was presented by Mr. Samuel D. Warren, who, up Boston way, has done for junior polo what Mr. Hazard has done for it around New York. There appears this year to be more appreciation of their efforts than there was last year.

One of the most serviceable features of scratch team tournaments, like that of Point Judith, at Narragansett Pier, is the trying out it gives men in various positions and under changing captains and styles of play; for although all teams strive to reach standard, yet there is scarcely one which may not be said to have an individuality.

Point Judith is particularly interesting, too, in disclosing combinations which we never see elsewhere, and that provide entertainment of an unusual and sport-giving character. The tournament this year was an especially good one, the average of play being quite up to that of the usual club week.

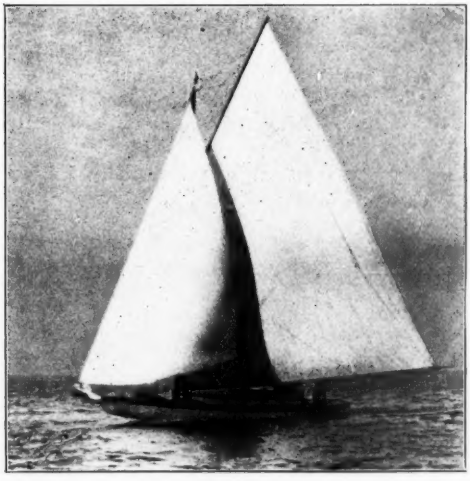
A match to interest me more than almost any other of the season, because it genuinely represented the respective habitats of the competing teams, was that on the flat between Bryn Mawr and Westchester, for the Ladies' Challenge Cup, at Cedarhurst. Messrs. C. R. Snowden, G. W. Kendrick, George McFadden and Chas. Wheeler were the Philadelphians; while Messrs. J. I. Blair, J. M., Jun., and L. Waterbury and E. C. Potter played for Westchester. Perfect and fast team work gave Bryn Mawr the victory, 11 to 8¾ goals, but the sharp work of Westchester, which scored within two goals as many as their adversaries (losing ¼ on safety), suggests what a real Westchester team, if one could be kept together long enough to become acquainted with one another's game, might do in the very best company.



CADILLAC,
Unsuccessful Defender of *Canada's* Cup.

English-American Lawn-Tennis.

It was very disappointing that no English lawn-tennis team came over for the International Cup play, but there appears to be no occasion for the harsh criticism with which their withdrawal was received. The English Association did all in its power to organize a challenging team, after the Dohertys decided not to come, but without success. There is no doubt of Mr. R. F. Doherty's poor physical condition; his defeat in the English championship, by Mr. A. W. Gore, is sufficient evidence of how far from first-class form his ill health placed him. The original team chosen included the two Dohertys and Mr. Hillyard, and of this R. F. was the keystone, being the main reliance in singles and his brother's partner for the doubles. Without him, no team the English Association could muster would make even an interesting bid for the Cup, for among Messrs. Hillyard, S. H. Smith, Eaves, Black and Gore was none who could hold his own against any one of half a dozen American players. The spectacle of Mr. Gore as champion of England is a somewhat amusing one.



MILWAUKEE,
Second in *Canada's* Cup Trial Races.

Counting the Dohertys out, not only is the first American half dozen better in singles, but the same may be said of the several leading teams in doubles. Aside from the Dohertys, there is no English team of especial strength, while we have, beside Ward and Davis, the Wrenn (R. D. and G. L., Jr.) brothers, Ware and Wright, Little and Alexander, and Hackett and Allen, and

one or two other combinations of not much less strength.

There has been some very interesting doubles play around New York recently, and I incline to the opinion that, however the champion events are decided in Newport, the best team in the country will not be found among the entries. When the Wrenn brothers beat the champions Davis and Ward, shortly after the return of the latter from England, it was said to be an off day for the champions; but subsequently the brothers beat also the Princeton players, Little and Alexander, who at the time held the Western championship, and were regarded one of the strongest teams in the land. This suggested that the first match had been won on form; unquestionably it was, and I have little doubt that with practice R. D. and G. L., Jr., Wrenn could walk into Newport and carry off the doubles championship, which is being decided while we are on the press. And R. D. Wrenn, the unbeaten singles champion, has been an "inactive player" for two or three years! There are other experts and one-time champions who ought to be encouraged to get into the game once more. Tennis, by the way, is being played more this year than in any season for the last five.

Next year Mr. Malcolm D. Whitman will probably play in the English championships; if he does he ought to bring the title to America.

An Example to be Followed.

The incorporation of the Lake George Regatta Association carries an idea for co-operative summer resort sport and good fun which could be copied to much advantage in a dozen different directions. To be sure, the Lake George cottagers are an especially alert and sport-devising community, and make the most of their splendid natural opportunities, but what they achieve with éclat may, to a lesser degree perhaps, be accomplished at all inland lake resorts, whose number in this country is legion. At Lake George, the cottagers get together, elect a president, Mr. John Boulton Simpson, appoint a committee — whose leading spirit is Col. W. D. Mann —and hold races, with trophies for the fastest and best decorated launches. This year two handsome trophies have been offered—one by *Town Topics* for the fastest launch, and another by the *Smart Set* magazine for the one best decorated. There is no entertainment of the outdoor season which gives more pure sport to a larger number than such events as these.

It is a pity a similar spirit could not have prevailed at the Cayuga Lake Regatta, instead of the professional one which demanded cash prizes.

SENNEVILLE,
Winner of Seawanhaka International Challenge Cup.

Golfing Fever Subsiding. It looks very much as if the story of roller skating and the bicycle is about to be repeated in golf; there is a decided falling off in number of players—not so much in the numbers of the tournament player as in those of the general player. Yet there has been a noticeable lessening in club tournament entries, also, and in the number of tournaments; a considerable discrepancy between this season and last. It does not mean the game is going to die out, for that will never be, but it means the end of artificial stimulus, and that the game will lose, just as bicycling lost and was better for it, the restless crowd which follows fashion from one game, or collar, or handshake, or cravat, to another. Good riddance; golf will prosper without them.

Amateur Golf Championship. Out of the dozen or so promising young players that went into the game, two or three years ago, ought to come, one of these days soon, an amateur champion; but I do not expect to see the hope realized at Atlantic City in the championship this year. Messrs. Hollins, Jun., Pyne, 2d, Hitchcock, Jun., Livingston, Jun., Seeley, Reid, Jun., Watson, have all given suggestions of championship form, but none of them is good enough this year, I fear, and some of them will never be good enough unless they mend their training habits.

Mr. Findlay Douglas seems in direct line for the championship this year, whether Travis is a competitor or not. It is likely Mr. Travis may not play—not because the U. S. G. Association has, as it should, debarred him and A. G. Lockwood for their free-board-and-transportation trip last winter, but because he is, I regret to say, not in the best of physical condition, and is at present in England for a change of air. Mr. Douglas has this year, for the first time, had sufficient practice, and it has put him right on his game; it does not look as if there is a man among our amateurs who can keep pace with him for 36 holes, although some of them have been doing splendid work at 18 holes, notably John Reid, Jun., Percy Pyne, 2d, A. M. Brown, R. C. Watson and William Holabird, Jun. The last is the young Westerner who recently carried all before him at Onwentsia, including Mr. W. L. Thompson, who last year achieved the distinction of beating Mr. Travis for the Westchester Cup.

The interest of the forthcoming tournament will be provided by the struggle among these young players in the second and third rounds, but there is no likelihood any one of them will stand long against Mr. Douglas. The one native player who could, Mr. Herbert M. Harriman, is otherwise occupied.

Golfers will be pleased to learn that a committee is about to be appointed by the National Association for the purpose of drafting a rule to prevent more free-board-and-transportation tours such as that of Messrs. Travis and Lockwood. Let the

GREY FRIAR,
The Defeated Challenger for the Seawanhaka International Cup.

work be done speedily and fearlessly, for it is needed. Also, while the Association is alive to present needs, why not appoint a question-of-rules-committee? At present there is no source whence official dictum may be had on a disputed rule.

Canada's Cup Won by Invader.

The trial races of the Chicago Yacht Club for the selection of a defender of the *Canada's* Cup, for which the Royal Canadian Yacht Club (Toronto) had challenged, were quite the most interesting yet to have been held, on account of the variety of types among the entries. There were nine starters in the first race, but only four gave evidence of cup form.

Cadillac is a typical Hanley boat, 11 ft. 6 in. beam, 18 in. draught, 28 ft. 2½ in. load water line, 48 ft. over all; carries 1,500 sq. ft. sail, a beam well forward and inside ballast of two tons. *Illinois* is like all Crowninshield cutters, flat floor, short deep fin, 5,800 lbs. outside lead; beam 9 ft. 4; load water line 28ft., and 46 ft. over all; sail area about 1,500 ft. *Milwaukee* is a large scow, broad and shallow, called in the Middle West an inland laker, and is similar to the 20-footers on the inland lakes of that section; she has a weighted centerboard of 800 lbs., 50 ft. over all, and carries 1,200 ft. of sail. *Detroit* is a beamy centerboard carrying 1,500 lbs. inside ballast, and of about the same dimensions as *Cadillac*.

During the trial series every boat of these four was beaten by all the others; for example, *Detroit* was a consistent second or third, and while not getting a first, she finished ahead of *Illinois* three times, of *Cadillac* twice, and of *Milwaukee* twice. In windward work *Illinois* seemed the best, especially in any breeze above 12 knots, but she could not reach with either *Cadillac* or *Milwaukee*. *Milwaukee* proved a wonder in reaching, but was deficient in weatherly qualities. She is fast in smooth water, but a decidedly bad type to encourage. *Cadillac* proved, after the trying out of nine races, to be the best all-round boat of the fleet, and was chosen the official defender by the Committee, which, with Mr. John B. Berryman in the chair, conducted the races with thoroughness and good judgment.

The English built (Siblick Brothers) challenger *Invader* is a fin keel type, quite like the *Minota* of the Canadian defense fleet of 1899, and is 9 ft. 4 in. beam, 6 ft. 2 in. draught, 28 ft. 7 in. load water line, 49 ft. 3 in. over all length, sail area 1,440 sq. ft. She has a steering wheel and an open unfloored and unsealed cockpit, while *Cadillac* has a cabin trunk and water-tight cockpit. In anything of a breeze, the defender showed the superiority of her form for the usual conditions of the Great Lakes. *Invader* proved to be an extremely lively light-weather boat, smartly sailed by Mr. Emilius Jarvis; and as this kind of weather prevailed, *Invader* won; twice on fair sailing and once on foul. *Cadillac* had her weather but once and won. She was well handled by Mr. Wm. Hale Thompson.

Seawanhaka International Cup Challenger Outclassed.

The races for the Seawanhaka International Cup between an English challenger, *Grey Friar* and the Canadian defender *Senneville*, were so one-sided as to be of very little interest. The English boat was completely outclassed in design and in sailing. Compared with the *Sennville*, she is a freight boat in speed and construction, her entire make-up being clumsy and heavy. On the other hand, the *Senneville* is just such a refined racing craft as we should expect from Mr. G. H. Duggan, who also sailed her in masterful fashion.

Constitution the Chosen Defender.

Although small doubt exists of the *Constitution* being finally chosen to defend the *America's* Cup against the *Shamrock II.*, the *Columbia* is now unquestionably the faster boat in any breeze of more than 14 knots' strength; and while the *Constitution* has not yet attained her full speed, yet I doubt if she will ever be able to beat the *Columbia* at any distance in an 18 to 20 knot wind. The choice of the *Constitution*, however, is eminently fitting, because in the very soft airs which so largely prevail she is a marvel, and minutes faster than the *Columbia*; and she is becoming a faster boat in all kinds of weather every day she sails. By the time of the Cup races, she will be at least one or two minutes faster, under any conditions, than she is to-day. Herreshoff built her with the idea of making a light-weather *Columbia*, and everyone on board the *Constitution* will be very well satisfied if she is able to hold the old champion in stiffish weather this month. Eventually the new boat, with her one-foot wider beam and

fifteen per cent. more sail, on the same displacement, should win from the old one invariably in any kind of weather. But the *Columbia* has done some noble sailing, and been handled with consummate skill by Mr. E. D. Morgan and his skipper, Captain Barr; her win of the Astor Cup from the *Constitution* was a signal triumph and a popular victory.

The *Independence* had her own conditions, and made her best race against the *Columbia* in a breeze ranging from 18 to 25 knots at the close of the Newport series, and although beaten 1 min. 11 sec. corrected time, proved herself a very fast craft when wind and sea are to her liking. While so uneven a performer cannot be viewed seriously as a candidate for Cup defense trials, yet the *Independence* has proven that in her designer, Mr. B. B. Crowninshield, we have a likely successor to Mr. Herreshoff.

Good Automobile Law.

Connecticut has recently put into effect a law regarding automobiles which is needed, and should be widely copied. It limits their speed to twelve miles an hour in cities and fifteen miles on country roads; if a driver of a horse holds up his hand when meeting an automobile, the chauffeur must instantly stop. This is good law—law much needed as protection against those automobilists who are not only endangering the lives of people, but bringing automobilists as a class into undeserved disrepute. Every State needs such law as this.

International Shooting Matches.

With every apparent incentive to excel in marksmanship, England's absence from the international rifle meet at Sea Girt (New Jersey) this month (Aug. 20 to Sept. 7) is not a little surprising. But the English Rifle Association sends regrets because of the "impossibility of securing a representative team." England has not often sent teams to these international shooting contests, either in this or any other country. And England's marksmanship in Africa against the Boers has been notoriously mediocre; not that the failure to hitherto send teams to America is responsible, for poor marksmanship of her troops, but two facts are, at least, coincident: (1) that she is not and has not been a regular participant in foreign rifle matches, and (2) that the shooting of her troops is trustworthily reported to have been surprisingly poor.

Ireland, on the other hand, next to America, has been a most consistent attendant at international rifle matches; and Irish troops, next to American, have done, the most accurate shooting. The Canadian troops have had so comparatively little field experience as to leave no very dependable records, but what active service they have had, puts their marksmanship next to that of the Irish and ahead of the English.

A Canadian team has entered, by the way, for the Sea Girt international championship match, and an Irish team is coming over to shoot a special match at long range. There is prospect also of a team from Italy.

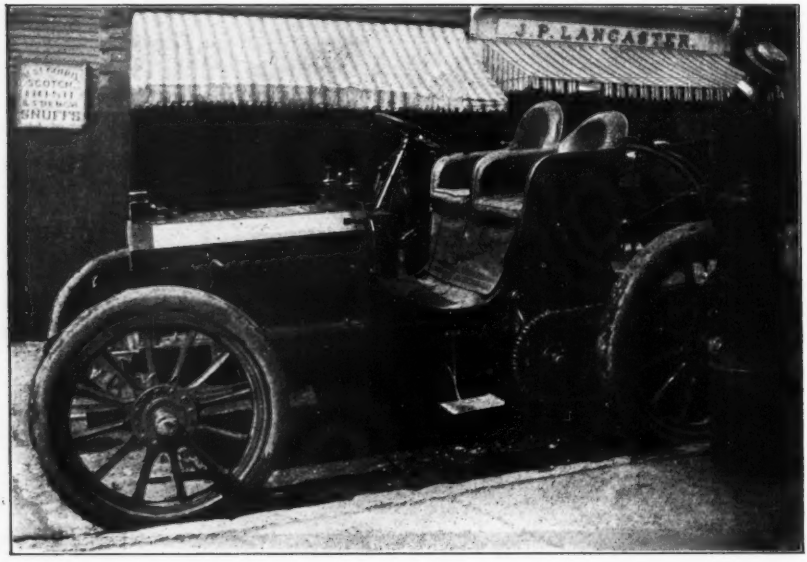
For the native part of the tournament there is promise of an interesting competition; eleven States have entered teams for the Hilton trophy—New York, New Jersey, Massachusetts, Pennsylvania, Maine, Rhode Island, Ohio, Michigan, Vermont, Minnesota, and the District of Columbia; a team has also been entered from the U. S. Marine Corps, and there is a probability of one also from the Department of the East U. S. A. It is officially stated that the New Jersey Association team will, in its match with the Irish team at long range, use the Winchester single shot, .30 caliber, the best results having been obtained from that rifle, after experimenting with all the American makes. In the carbine and revolver matches, cavalry teams have been entered by New York, New Jersey, Maryland, Pennsylvania, Massachusetts and the District of Columbia. In these days, when the man behind the gun is IT, no well-regulated State should be without its annual rifle match, or a country without its marksmen.

Brilliant American Success at the Traps

Apropos of international shooting, those were impressive victories the American trap shooters secured the other day at the range of the Middlesex Gun Club at Hendon, England, for the International Gun Meet stakes. The totals were Americans 877, British 794; highest individual American score 278 out of a possible 300, by Mr. W. R. Crosby, of Illinois; highest British score 253, by Mr. Izzard. Subsequently the Americans beat a team of Scotchmen, 973 to 882 points, the highest individual Scotch score being 96, while of the Americans Messrs. Gilbert and Merrill scored the highest possible,

Crosby scored 99 and Tripp, Heikes and Fanning, 97 each. This is exceptionally fine scoring on clay targets. The team went abroad to shoot five matches, but having won three in one, two, three order, the remaining two were unnecessary. But the impressive feature of the contests was the condition of each American being permitted the use of only one barrel at a target, while the British, in accordance with the terms of the match, were permitted to use two barrels at a target. The American reputation for marksmanship may be safely trusted with such a team.

Undesirable Distinction. We should take a great deal more pride in the victories of the lacrosse team of the Crescent Athletic Club (of Brooklyn) over visiting Canadians, if the games were won with less resort to unnecessarily rough, not to say foul play. In a match which I witnessed between Crescent and a Toronto University teams the play of the former was simply brutish and disgraceful. Three of the visitors were disabled, and subsequently the Canadians in pure, and I must add, justifiable retaliation, disabled two of the Crescents. There appears to have been a change of heart at the Crescent Club. A sportsmanly spirit used to rule in the council chamber and on the playground—now the club enjoys the distinction of having the most muckerish playing hockey team in this vicinity, and a lacrosse team which relies on foul tactics to help win its games. A little house-cleaning seems to be in order.



THE NEW GERMAN AUTOMOBILE OF MR. W. K. VANDERBILT, JUN.

It is said to have power equal to driving it 70 miles an hour, though it has not as yet given exhibition of speed within twenty miles of that pace.

THE SEAWANHAKA INTERNATIONAL CHALLENGE CUP RACE

THE seventh annual match for the Seawanhaka International Challenge Cup brings in for the second time an English yacht as a challenger; the first match having been between the English half-rater *Spruce IV.* and the American representative *Ethelwynn*, both racing at 15 feet measurement by Seawanhaka rule. The Cup being successfully defended by *Ethelwynn* was won a year later by *Glencairn I.* of the Royal St. Lawrence Yacht Club of Montreal, which has since held it in four matches with American clubs. In the first American challenge, 1897, the yachts were of the 20-foot class; in 1900 the 25-foot class was mutually agreed on, and in the present match the equivalent class of the defending club, 500 square feet measurement, was agreed on. The challenge came from Mr. Lorne C. Currie, one of the younger set of English yachtsmen, residing at Havre, France, and racing in both English and French waters. In 1900 Mr. Currie challenged for the cup of the Cercle de la Voile, of Paris, and was defeated, but in a second match this year he was successful. His challenge being accepted last fall by the Royal St. Lawrence Yacht Club he ordered three yachts, *L'Esperance*, designed by Mr. Linton Hope; *Insula*, designed by Mr. Harley Mead; and *Grey Friar*, designed by Mr. Chambers, an amateur. These were completed early in the spring and a series of private trials, fifteen in number, were sailed on the Solent over triangular and windward-and-leeward courses, the result being that *Grey Friar* was selected as the fastest all-round boat. The races for the Cup took place on July 25, 26, 27 and 29, all being sailed in very light weather, the second day's trial being a failure as the leader could not finish within the time limit of 3½ hours for the triangular course of 12 miles.

The defending yacht, *Senneville*, won all three races, the first in the time of 3-30-57 for the 12-mile course, half to windward; the second in 3-38-50 over the triangular course; and the third in 2-27-42. *Grey Friar* was beaten by 19 minutes 15 seconds in the first race, 7 minutes 30 seconds in the second, and 4 minutes 56 seconds in the third. The general result may be very briefly summarized: In the first place *Grey Friar*, though selected as the fastest of the trio in light weather, was plainly inferior to *Senneville* under all conditions from a drift up to almost a whole-sail breeze. Her crew, which accepted defeat very cheerfully and hopefully, considered that she did better work as the wind hardened at times in the first races, and was quite confident up to the last that with a good breeze she would defeat *Senneville*. To the disinterested, however, there was nothing at all in the actual performance of the boat on Lake St. Louis to warrant the belief that she could hold *Senneville* in any moderate weather; and a careful scrutiny of her when ashore showed no indication of superior power in a reefing breeze. The most that can be said is that *Grey Friar* would have been at her best in a breeze which would just permit her heavy crew to carry whole sail by hiking, a condition never reached in the races. Any more wind compelling her to reef would have crippled her hopelessly as compared with any good Duggan boat. In every point except pluck and spirit in execution and good temper under defeat, Mr. Currie's expedition was weak in the extreme and its failure carries with it a most important lesson to British yachtsmen.

Taking up first the defense of the Cup, this has been carried on in a most systematic and businesslike manner since 1896 by Mr. Duggan and his friend, Mr. F. P. Shearwood, who have designed all the defenders as well as the first winner of the Cup, and by the members of the club, who have spared no money in building and no pains in testing the large defending fleets of each year. *Senneville* is but one of half a dozen boats fully capable of defending the Cup, this group representing a continual course of evolution and perfection begun in the fall of 1895 when the club first challenged, taking prominent shape in the victory of *Glencairn I.* in the following year, and going on continuously, designing and building in winter and sailing trial and Cup races in summer up to the present time. The new boats, though larger and in many ways different, are all based upon the general principle of design introduced by Mr. Duggan and Mr. Shearwood in the first *Glencairn*; the form of hull being such as to give a very short waterline when upright and in measuring trim, with a disproportionately long waterline and a body of fine form when the boat is heeled to an extreme angle and only the lee bilge immersed. The necessity for a short measured waterline no longer exists, but the idea of obtaining a long narrow

canoe-like hull at the actual sailing angle is still retained. The four defenders of 1900 and the four of this year are practically identical in hull and rig, being about 37 feet over all, 26 feet waterline, 8 feet breadth and 4 inches draught, the sail area being 500 square feet and the centerboard weighing about 340 pounds with a drop of 6 feet, the maximum allowed. The lines show a flat floor, a round bilge and a moderate amount of flare to the topsides in the midship section, the hard bilge being carried aft to the transom, as shown in the photo, and as far forward as possible in the bows. All of the boats have a liberal freeboard amidships and a decided sheer at each end, giving a reserve of buoyancy in rough water and stability at extreme angles of heel. Out of some fifty designs made and in most cases built by Messrs. Duggan and Shearwood for the Cup races since 1895, there are hardly two exactly alike, but small changes in dimensions, form of section and waterlines, displacement, and calculated stability, are made and carefully noted by the designers. The work throughout has included careful scientific designing, with full calculations of stability and of all strains on hull, spars and rigging, followed up by thorough trials of the yachts under sail and the subsequent comparison of estimated performances with observed results. At the same time, owing to the lack of skilled builders, sailmakers and blockmakers in Canada previous to the Cup races, the designers have been compelled to give their personal attention to all practical details; to-day the boats are built on the club grounds, Mr. Shearwood being manager of the company formed by the club members; the hollow spars are also made there, very good sails are made by local sailmakers in Kingston and Montreal who have been trained to the work by the yachtsmen, and all fittings are specially made from designs.

All yachts contesting for the Seawanhaka Cup must be built to certain scantling restrictions, the Duggan boats being carvel-built with half-inch cedar planking, a groove being pressed into the edges of each plank and a light thread of cotton cord laid in as the planks are put in place. One important feature is the use of a lattice truss of light pine strips on each side of the cockpit, running the full length fore and aft, the two trusses giving great stiffness to the light hull; a secondary system of similar light bracing to the centerboard trunk gives transverse stiffness but greatly interferes with the movements of the crew about the cockpit. The photo shows the cockpit, somewhat longer this year than usual, with two fixed transverse braces at the deck level; the deck beams are not arched but have a straight pitch from the center; there are no transverse bulkheads below deck. The centerboard is of $\frac{3}{8}$-inch steel plate, deep and moderately wide, controlled by two light open-shell triple blocks with manilla fall, one block being fast to a wire strop around the mast. The board is hung on rollers so as to be movable forward and aft in a long trunk. The rudder is of the balanced type, two pieces of thin sheet steel with wood filling between; the tiller is a single long stick with a second piece pivoted on the top, allowing the helmsman to steer when well out to windward.

After trying different rigs with varying proportions of mainsail and jib and extremely broad and narrow mainsails, Mr. Duggan has come to a proportion of about 25 per cent. of total area in the jib with a mainsail that is only moderately high and narrow. The sails are of light cotton, cross-cut, with ordinary reef points. The spars are all hollow, the rigging has but one shroud to a side, set up by lanyards, the main sheet has two travelers on deck, all details being shown in the photo. The backstays are set up in the usual manner and double lifts are used. The blocks are of sheet bronze or on this year's boats of an open shell of cast bronze with roller-bushed bronze sheave; they excel in lightness everything thus far made in this line. A new design of jam cleat is used this year for the first time.

Two of last year's boats, *Red Coat*, the defender of the Cup against *Minnesota*, and *Black Cap*, sailed in the trial races and proved nearly equal to the new boats, *Senneville*, *Thorella*, *Black Sheep* and *St. Lawrence*, in fact the final choice between *Senneville*, *Thorella* and *Red Coat* was a most difficult matter and either of the three would have been a satisfactory defender of the Cup.

The challenger's chief distinction lies in her clear and unimpeachable claim to the title of freak; she is not only a departure from the conventional, but there is in her model nothing to commend and no evidence of any distinct motive or principle on the part of her designer.

The remarkable part of the construction was the absence of the fore-and-aft trusses which have proved absolutely indispensable in the Duggan boats, as well as the transverse bracing. The peculiar form of the transverse section, there being no round bilge, and the wide deck meeting the flaring side at an acute angle and mutually bracing each other, may account for the absence of the transverse

bracing, but with an all-over length of almost fifty feet, the maximum in this class, it seems strange that the hull stood as well as it did without longitudinal bracing. The centerboard was just up to the limit of 350 pounds, of ⅝-inch steel plate, comparatively long and shoal when down, dropping but 5 feet 6 inches instead of 6 feet as allowed. It hung on a pin in the usual manner, and was lifted by a powerful but heavy and cumbrous tackle. The weight of this arrangement was probably five times as great as the two small blocks and wire rope strop that served the same purpose on *Senneville*. The rudder was of solid steel plate, very much heavier than the Duggan form of sheet steel and wood, and of different shape, raking more aft. The tiller was of the Y form, but very small, preventing the helmsman from sitting far to windward. The sail plan showed a large head triangle and a small mainsail, and in addition the total area was eighteen feet under the limit; the mainsail of *Senneville* was made of full size and afterward cut down until as measured by the committee just before the first race, the total area was but two feet under the limit; that of *Grey Friar*, in addition to other defects, actually wasted eighteen feet. The mainsail was fitted with the roller boom used in England on small yachts, no doubt an excellent expedient for single-hand cruising, but of questionable advantage in this race even had the occasion required its use. The foot of the sail was cut up until the clew was at the hight of a man's head above the deck, raising the center of effort and the center of gravity, and in order to accommodate the roller gear there were no mast hoops, but a very loose lacing which left a gap of six to eight inches between the luff rope and the mast. The sail itself was of a beautiful material, smooth and with a silk finish, but rather heavy in weight; it was made to sit well, but without the flow and fulness of the Canadian sails. The rigging included three shrouds to a side, each of the same size as the single shroud which does the same work on the Duggan boats; these shrouds led down through the deck and over sheaves just below deck, and were set up by lashings to eyes under the mast. The spreaders were in a single steel forging, encircling the mast, where *Senneville* had two steel tubes, each fast to a small eye in the mast; the gooseneck was a large and heavy steel band as compared with a thin bronze strap around the mast of *Senneville*, with two light bronze castings riveted to it. The blocks were ordinary wooden yacht blocks, with elm shells and patent sheaves of galvanized iron, the hooks and shackles being ordinary steel forgings; one block would probably outweigh five of the light sheet bronze affairs of the Canadian fleet. The gaff bridle, as shown in the photo, was so rigged that the entire strain came on the middle of the gaff, buckling it at times in a way that promised trouble in a strong breeze. The deck cleats were of the old Butler pattern, and where a special new pattern of bronze spring snap hook was used on *Senneville*, *Grey Friar* had in many places a screw shackle, requiring a marlinspike to open and close it in shifting sails. A glance at the two photographs will show the simplicity and clean finish of the gear about the masthead of *Senneville* compared with the bulky and clumsy appearance of that of *Grey Friar*.

Looking at the hulls side by side on the railway, the advantage was entirely with the defender, her form when heeled being superior in power, her topsides, as proved by long experience, being needed on Lake St. Louis, if not on the Solent and Long Island Sound. Seen under way, the sail plan of *Grey Friar* with its small mainsail, high boom and wide gap between mast and mainsail, seemed entirely inadequate to drive the great area of inclined hull to windward. When heeled to her best sailing angle, *Senneville* stood up straighter than *Grey Friar*, her larger actual sail area and superior disposition of sail thus being still more effective; her round bilge and straighter side gave a slight gain in lateral resistance which was greatly increased by the extra draft of her centerboard, and everything about her indicated just such a result as was seen in the races, a steady gain to windward in spite of *Grey Friar's* speed through the water at times. The weakness of the challenging party extended to the crew, Mr. Currie and his three Corinthian associates being all expert yachtsmen and, as the event proved, thorough sportsmen, taking their defeat in the best possible spirit, but their experience was mainly, and in one or two cases entirely in much larger yachts, and they further lacked the thorough drilling which the Canadians have had in their many races, and which makes a crew a strong unit instead of a weak combination. The races hold a valuable lesson for all concerned in international racing, as showing the value of continuous and systematic work, not only in the designing but in all details down to the most trivial.

W. P. Stephens.

PIKE AND "PICKEREL"—QUERIES

OF all the months of the year, September and October are the ones selected by the angler in which to fish for the mascalonge, the largest, and by many considered the most game, of all the inland fishes of American waters. Certainly, its enormous size and distinctive habit of leaping into the air when hooked, entitles this fish to the reputation given it by anglers, comparatively few of whom have trolled for this mammoth of its tribe.

The mascalonge, although standing at the head of the pike family, has physical markings of such a character that a casual inspection will not distinguish it from its lesser congener, the pike, and as the latter in many of the states carries the misnomer of "pickerel" the confusion is the more confounded.

What is a mascalonge? What is a pike? What is a pickerel? are questions constantly asked, not so much from a dearth of knowledge on the subject, as from an obstinacy of conviction, so strong among fishermen, that the only proper name for a fish is the one that is in use in their local community. For instance: The pike is known in the states west of the Alleghanies, in western New York and in a few of the New England States as the "pickerel" and the wall-eyed or glass-eyed pike, or pike-perch, which is not a pike, but belongs to the perch family of fishes, is known in northern Wisconsin as the "pike;" and then again, along the Canadian line of the Great Lakes, the pike-perch is called the "pickerel," and in other sections of the Provinces it is known as the "dorê." But the intelligent and knowledge-seeking angler will find no difficulty in distinguishing apart the members of the pike family, particularly the mascalonge, from their generic relatives.

First as to coloration: In the typical mascalonge, the habitat of which is the Great Lakes system of waters, dark spots will be found on a light background. In the pike light spots are seen on a dark background. This striking variation in color is modified by the absence of spots in mascalonge that are caught in the waters of the Mississippi system, notably those of northern Wisconsin, in the waters of the Eagle Lakes and in Chautauqua Lake of western New York, the outlet of which flows into the Ohio River, thence to the Mississippi. Traces of the spotted coloration may, however, be seen in the so-called unspotted mascalonge, in the faint disconnected ticks — - — - — somewhat similar to the old Morse telegraphic alphabet, which are found on exceptional colored fish. The pike cannot be mistaken for either of these, as it invariably shows light spots or blotches on a dark background.

In the waters east of the Alleghanies is found a pond pickerel known in many sections as the "grass-pike," which grows to a weight of six to eight pounds. It may be known on sight by the constant presence of crossbars or reticulations and by a dark band immediately below the eye. A pickerel similar to this one has recently been found in the waters of the Ozark region. There is a small pickerel in the western waters which is never found in those east of the Alleghanies. It seldom, if ever, grows larger than twelve or thirteen inches or weighs more than a pound. This fish cannot be confused with the young of either the mascalonge or pike, as it is without spots and when not entirely of one color, has curved streaks and sometimes darkish lines or bars on its sides. A similar small pickerel exists in the East and is never found west of the Alleghanies. It is of dark green coloration with blackish bars, often indistinct. To further differentiate the species of the pike family, it may be noted that scales are found on the cheeks of the pike and not on the lower half of the cheek of the mascalonge.

NOTES AND QUERIES.

A CORRESPONDENT wishes me to tell him why the black bass will take the artificial fly in some lakes and not in others, none of them more than a few miles apart, and the bass in all of them being surface feeders. In answer it is safe to state that the small-mouthed black bass will take an artificial fly in all waters they live in, if fished for under favorable conditions. It is also possible that our correspondent has not given the fish a fair trial with the feathers, hence has come to a hasty conclusion. There are times when the black bass will take the fly, particularly in running waters, at all hours of the day, as fiercely in the glare of sunlight as under a lowering sky, but these occasions are very widely apart. It is best not to fish for them in streams until dusk or when the day is very cloudy, and at such times a medium size fly, what is known as a large trout fly, tied on a No. 4 Sproat hook is the most fruitful. With two of these flies, whip the head, middle and foot of the pools, but never the rapids, although the larger eddies on the edges of the current often shelter a lurking bass.

It is a waste of time, I think, to fish broad lake waters for black bass with a fly, unless you find shallow ledges of rocks where the water is not more than three or four feet deep. The bass, however, not finding a supply of food among the rocks, will forage near the shore, particularly around and in the water grass of the little bays, and at the mouths of the small brooks that flow into the lake. It is not claimed that black bass will take an artificial fly in preference to the spinner or natural baits, although they have been known in some waters to do so. It is simply said to doubters that the black bass, if fished for under proper conditions, can be taken with the feathers and in fair scores in all waters of which this fish is a habitant. Of course, difference in habitat will affect measurably, and in limited instances, the habits of the bass, their hours of feeding, action when hooked, coloration and to a slight degree their physical structure, but a hungry bass in any water will seize a moving lure if it approaches in action that of a living creature.

ANOTHER correspondent asks for the names that Henry Guy Carlton gave to black bass some time in the eighties. Fortunately, I happen to have the data in my scrap-book. It is unique and practical: Small-mouth black bass running from 2 oz. to ½ lb. he designated as "throwbacks;" from ½ lb. to 1 lb., "cookies;" from 1 lb. to 2 lbs. "good ones;" from 2 lbs., to 3 lbs., "corkers;" from 3 lbs. to 4 lbs., "thumpers" and those from 4 lbs. to 5 lbs. "busters." He wrote me some years ago: "When I meet a friend who says, 'I got nine throwbacks, five cookies, three corkers, and a buster,' I know exactly the amount of sport he must have had, and when he remarks in an off-hand Kelly-Island-way that he has lost a regular buster I could sympathize with him truly for I know how heavy his loss had been."

A Canadian correspondent is informed that trout and other game fishes are often infested with worms. If these swarm in the body of the fish, its health is affected, it becomes attenuated, the back assuming the shape of a ridge and death finally occurs. The black bass in some western lakes is subject to tape worms which so affect their shape that the fish are known as "razor backs." Dr. Leidy, of Pennsylvania, a great authority on the subject of worms in fishes, was of the opinion that the worms, if not too numerous, improved the flavor of the black bass, a belief not likely to be substantiated.

Mr. Farber, of Baltimore, Md., is informed that the largest trout taken in the Rangeley Lakes carries a record of twelve pounds. It was caught, illegitimately, on salmon roe. The largest taken on an artificial fly weighed nine and three-quarter pounds. It was caught by an angler at Middle Dam in the Rangeley.

IT is suggested to Mr. R. H. Float who wishes to know where good fly fishing for black bass can be had, that he try the Kankakee River at or near Momence, Ind., or the waters, White River particularly, near Indianapolis, Ind. I have never fished and cannot indorse any Canadian waters for black bass fly fishing. The best flies, in my experience, have been the different colored hackles, tied palmer fashion, that is well bunched on the bend and on the shank of the hook, which should not be larger than No. 4 Sproat.

MR. PAPWORTH, of Kaslo, B. C., is informed that the fish called the "redfish" found in Kootenay Lake, is the blueback salmon—*oncorhyncus nerka*—to ascertain the habits of which the United States Fish Commission has spent thousands of dollars. The one in Kootenay Lake has been recognized as the smaller or land-locked form of this fish, seldom, if ever, growing over twelve inches in length. The larger form having the same generic and specific name and anatomical construction grows to seven pounds in weight and spawns in the same waters as the lesser fish, but making its way from the Pacific Ocean, traveling in some instances at least twenty-five hundred miles to reach its spawning grounds. Kootenay Lake is prolific in fish life, as many of the salmon family either live permanently in its waters or pass through them to spawn in the tributaries of the lake.

"L. B. C." wishes to know to what family of fishes the so-called calico bass belongs, also by what other local names it is called. This fish belongs to the sunfish tribe and is known in different sections as the grass bass, barfish, strawberry bass, crappie, bachelor, Campbellite, sac-a-lait crapet. It seldom grows larger than twelve inches and there are only two species of them, one ranging in the Middle States from the Great Lakes to Texas, and west to Kansas and Nebraska, the other from the Great Lakes to New Jersey and southward to Florida, Louisiana and Texas. The first named is fond of sluggish ponds and bayous, the latter frequents cold and clear waters. They have been, of late years, profusely planted in the rivers of New York, Pennsylvania and New Jersey.

WM. C. HARRIS.

TWIST LAWN-TENNIS SERVICE

THE famous twist service of Messrs. Whitman, Davis and Ward has been so frequently under discussion as to have created much curiosity concerning its mysteries. Particularly is this true since the excellent showing of Messrs. Davis and Ward in the English Double Championship recently. Therefore we give space to the explanation of Mr. J. Parmley Paret, editor of *American Lawn Tennis*, of this now famous service: "This service is simply a scientific development of the common underhand twist strokes adapted for overhead play with the additional speed which has made the new stroke so formidable. It is a common error to call these deliveries reverse twists, for as a matter of fact, the only reverse twist overhead service in use among the experts is that delivered by Champion Whitman, while the twist service used by Davis, Ward and Alexander has all the natural out twist.

"Ever since the early days of baseball, the scientific theory of curving a ball in the air has been well understood. The top of a carriage wheel travels faster than the bottom, because its axis is moving ahead all of the time, and in the same way the friction on the side of a ball which is twisting on its own axis is greater on the side which is going fastest through the air—the right-hand side in a right twist delivery and vice versa. The rougher the surface of any spherical body the more it will curve in the air, because the friction becomes greater against the particles of the air itself. The rough felt covering of a lawn-tennis ball causes more friction than a leather covered baseball, and consequently the tennis ball curves more in the air.

"The secret of success in making this new twist service is not to make the ball curve so much to one side or the other, as to curve downward in its flight, like the 'drop' of a modern baseball pitcher. It is necessary to make a tennis ball drop quickly after crossing the net, if it is to be served with much speed and still strike within the boundary of the service court. To accomplish this, the ball must be hit on top as much as possible, and the secret of the new twist service lies in reaching over the ball and striking it from above as well as one side. The racket strings are drawn across the cover of the ball as much as possible, the ball taking the strings near one edge of the frame and leaving at the other side. To do this, a very quick side-motion is required, and it is this that gives the ball its rapid spinning motion.

"It has been a mystery to many why a tennis ball should bound in the opposite direction from its curve, but if one will apply the principle of the 'English' in billiards he will understand at once the reason. In the overhand out twist, as served by Ward and Alexander, the ball spins sharply on its own axis, combining the effect of right-hand English and the 'follow' shot in billiards; in other words it spins exactly like a billiard ball when hit for a follow shot with a right English. It curves to the server's left in seeking the line of the least resistance, which is a common rule in all physics, because of the greater friction on its right side, and it curves downward in its flight because of the greater friction on its top side.

"Instantly the ball strikes the ground it breaks to the right, because the spinning motion drags it that way when it comes in contact with the ground, just the same way as a billiard ball with right English rebounds to the right when it strikes the cushion of the table. Thus we have the double motion in this new twist service, which has puzzled so many who have played against it. The reason why its effect has been greater with American than with English balls is because the surface covering of the American ball is rougher than that of the English and the resistance in going through the air becomes greater in consequence. The ball gets a sharper twist from the racket because the rougher cover makes it cling longer to the string.

"The service used by Whitman has the reverse twist, his racket moves from his right to his left, the ball curves from left to right and breaks again to the left as it leaves the ground. Davis's service has the same curves and much the same effect as Whitman's, but Davis reaches very much further over the ball, hitting it faster and making it bound deeper. It is an out twist and not a reverse twist, however, because Davis plays with his left hand and the racket travels away from his body, not across it. The service used by Ward and Alexander is an out twist made with the right arm, the racket traveling away from the body, to the server's right, the ball curves from right to left, and breaks sharply to the right again after leaving the ground.

"In Whitman's case the racket travels across in front of his body and the tendency in making this reverse twist is to throw the server off his balance, and to make it doubly difficult for him to run into the net to volley the first return. In case of the out twist it is just the reverse and Ward is said to have invented this service in an effort to get the impetus of the racket to help him get in motion quicker after serving, in his effort to reach the net for the volleying position.

"In each case where this out-twist service has been successful, the server bends very far backward and drops his racket down far behind his back before making the stroke In each case, too, he reaches well up over the ball, and the more he hits it on top, the more speed he can secure and still make the ball drop enough to fall inside of the service court. There is a tendency, also, to ease up slightly on the inside edge of the racket so that the strings will follow the ball longer and give it a sharper twist in making the strokes.

"The keynote to success, however, lies in hitting the ball well on top, with a very sharp twist, the ball rolling across the entire face of the strings before it leaves it, and in striking very much harder than would be possible to bring an ordinary service within the court."